AN INITIAL INVESTIGATION FOR A MONITORING PROGRAM FOR THE SAFETY PERFORMANCE OF DESIGN EXCEPTIONS IN GEORGIA

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AN INITIAL INVESTIGATION FOR A MONITORING PROGRAM FOR THE SAFETY PERFORMANCE OF DESIGN EXCEPTIONS IN GEORGIA

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LIST OF SYMBOLS AND ABBREVIATIONS

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation
CAPS	Center for Advanced Public Safety
CARE	Critical Analysis Reporting Environment
CMF	Crash Modification Factor
DOT	Department of Transportation
FHWA	Federal Highway Administration
GDOT	Georgia Department of Transportation
GIS	Geographic Information System
HSM	Highway Safety Manual
INDOT	Indiana Department of Transportation
MP	Mile Post
NCHRP	National Cooperative Highway Research Program
NHS	National Highway System
PDO	Property Damage Only
PDP	Plan Development Process
QA/QC	Quality Assurance and Quality Control
STARS	State Traffic and Report Statistics
TransPi	Transportation Project Information
TRB	Transportation Research Board
TWLTL	Two-way Left-turn Lane
WSDOT	Washington Department of Transportation

SUMMARY

In roadway projects, design exceptions are implemented when the project site consists of one or more substandard design elements. The objective of this thesis is to conduct an initial investigation for a monitoring program for the safety performance of design exceptions in Georgia. A total of 467 projects containing design exceptions were reported in Georgia from 1995 to 2011, and from this crash data for 179 projects from 2003 to 2008 were sampled. The crash data collected in this research pertains to all roadway segments within the projects and is not necessarily related to the design exceptions. Future efforts will be required to explore potential connections between the crash rates and design exceptions.

The annual crash results generally revealed a high variability and randomness in the data. For this reason, the average 3-year crash frequencies before design exception approval date and after it were calculated to determine the safety performance for projects containing design exceptions. A method for determining expected results using the Highway Safety Manual (HSM) predictive method is also discussed. The findings will be used to guide future research on design exceptions and mitigation measures to improve roadway safety.

CHAPTER 1

INTRODUCTION

A design exception is a documented decision to design a highway element when minimum values established in the appropriate design standards are not met. Both Federal Highway Administration (FHWA) and Georgia Department of Transportation (GDOT) require a formal process to approve design exceptions, as they can negatively impact highway safety and traffic operations. The FHWA emphasizes fundamental steps of an effective design exception process, and the final step involves monitoring and evaluating the in-service performance of design exceptions. While GDOT's design exception process is explained in the GDOT Plan Development Process (PDP), a review conducted by both FHWA and GDOT found potential areas for improvement.

Currently, design exceptions are reviewed by GDOT engineers, the GDOT chief engineer, and FHWA before the corresponding designs are implemented in construction. However, their in-service performance is currently not monitored. Thus, current design exception process could be improved by examining the in-service performance in a systematic approach that validates expected risks and identifies projects that not meeting safety expectations. Potential use for this is the HSM which provides tools for estimating the expected safety performance at roadway facilities. In particular, the manual describes predictive methods used for evaluating design exceptions by quantifying changes in crash frequency with design exception approval.

This study conducts an initial investigation into a methodology that GDOT can implement to monitor the safety performance of design exceptions in Georgia. The

methodology includes an in-depth analysis of the crash frequency data before and after the approval of design exceptions. The crash data collected in this research pertains to all roadway segments within the projects and is not necessarily related to the design exceptions. Future efforts will be required to explore potential connections between the crash rates and design exceptions. This thesis will also discuss how the HSM can be used to compare the actual accident data to their expectations and conclude by providing recommendations and questions to consider for future research on design exceptions.

CHAPTER 2

LITERATURE REVIEW

The following literature review contains information on previous evaluations and case studies on design exceptions. Highway engineers and designers must balance key factors such as cost, safety, mobility, and social and environmental impacts [1]. In many highway projects, the design criteria offer sufficient flexibility to provide balanced designs while satisfying the minimum values. The American Association of State Highway and Transportation Officials (AASHTO) states that highway design guidelines allow engineers and designers to use professional knowledge and judgment. However, a design exception may be considered by the department of transportation (DOT) when the minimum design values cannot be met [2].

2.1 FHWA Design Exception Process

When highway engineers implement design exceptions to address non-conforming designs, they may do so for the following possible reasons: impacts to the natural environment, social or right-of-way impacts, preservation of historic or cultural resources, sensitivity to context, sensitivity to community values, and construction or right-of-way costs [1]. They must also consider the negative influence of design exceptions on safety. Therefore, FHWA and state DOTs both require a formal design exception approval process.

In 2007, FHWA published *Mitigation Strategies for Design Exceptions* to offer practical information on design exceptions to highway designers. It also discusses

important strategies to mitigate their potential adverse effects on safety and operations [1]. Figure 1 below shows specific steps recommended by the FHWA on how an effective design exception approval process is developed.

Figure 1: Fundamental Steps in the Design Exception Process [1]

This research will focus mainly on the final step: Monitor and Evaluate In-Service Performance. Monitoring the operational and safety performance of design exceptions can bring two critical benefits. First, it can help determine whether a design exception and any other mitigation measures are meeting expected level of roadway safety and operation. If the design has fallen below expectations, changes in design and/or new additional mitigations may be taken into account in further analysis. Second, lessons learned from design exceptions and mitigation measures can be used for both short-term and long-term improvements in highway design, operations, and safety.

2.2 Controlling Criteria

The primary and most widely used reference by highway designers is *A Policy on Geometric Design of Highways and Streets* by AASHTO [3]. Commonly known as the *Green Book*, it covers functional design specifications of roads and highways by recommending design value ranges for critical highway dimensions [2]. According to the Code of Federal Regulations (23 CFR 625), FHWA has authorized this document to be the design standard for National Highway System (NHS) roads [4]. This has led to states adopting the *Green Book* as the standard for their state road systems. Soon after the *Green Book* was adopted in 1985, FHWA designated 13 specific criteria from the *Green Book* as controlling criteria and affirmed that any deviation from these controlling criteria would require a formal, written design exception approval process [4]. The 13 controlling criteria are listed in Table 1 below.

Table 1: 13 Controlling Criteria Defined by AASHTO [3]

	Controlling Criteria
1	Design speed
2	Lane width
3	Shoulder width
4	Bridge width
5	Structural capacity
6	Horizontal alignment
7	Vertical alignment
8	Grade
9	Stopping sight distance
10	Cross slope
11	Superelevation

12	Vertical clearance
13	Horizontal Clearance

If the roadway project is on the NHS, any deviation from the 13 controlling criteria requires a formal design exception approval from FHWA. On the other hand, for projects not on the NHS a formal design exception requirement does not exist [4]. Nonetheless, states can document their own design exceptions on non-NHS roads when minimum design values do not meet their standards [1]. Projects involving resurfacing, restoration, and rehabilitation are called 3R projects and also do not require design exceptions because the existing highway alignment is usually retained in the process [1].

2.3 Nominal vs. Substantive Safety

Nominal safety is is an "either-or" condition that indicates whether a design meets the minimum design criteria for the 13 controlling criteria from the AASHTO *Green Book*. If the design satisfies the 13 controlling criteria it is nominally safe; if it does not satisfy one or more of the 13 controlling criteria it is nominally unsafe. Thus, a project location with design exception(s) is not considered nominally safe [1]. The concept of nominal safety is limited in scope because it does not analyze the expected or actual highway safety performance.

Unlike nominal safety, substantive safety is used for analyzing the actual long-term or expected roadway safety performance. It can be measured quantitatively by crash frequency, crash type, and crash severity. Although a roadway is nominally safe, it may be substantively unsafe and experience high crash rates. Similarly, a nominally unsafe

roadway may show high level of substantive safety. This implies that design exceptions can possibly be implemented without negative impact on substantive safety. To further examine this issue, a monitoring program is necessary for evaluating the substantive safety of design exceptions [1].

This lack of correlation between nominal safety and substantive safety occurs because the controlling criteria is dependent on many factors and yet is derived from simplified models and assumptions. Statistical models are used for different highway types and characteristics, but they are often applied broadly and not specific to local conditions. Figure 2 below shows a comparison of nominal and substantive safety in a crash risk vs. design dimensions model. Even small changes in design dimensions will impact the crash risk, and this suggests that substantive safety is a better indication of true safety performance [1].

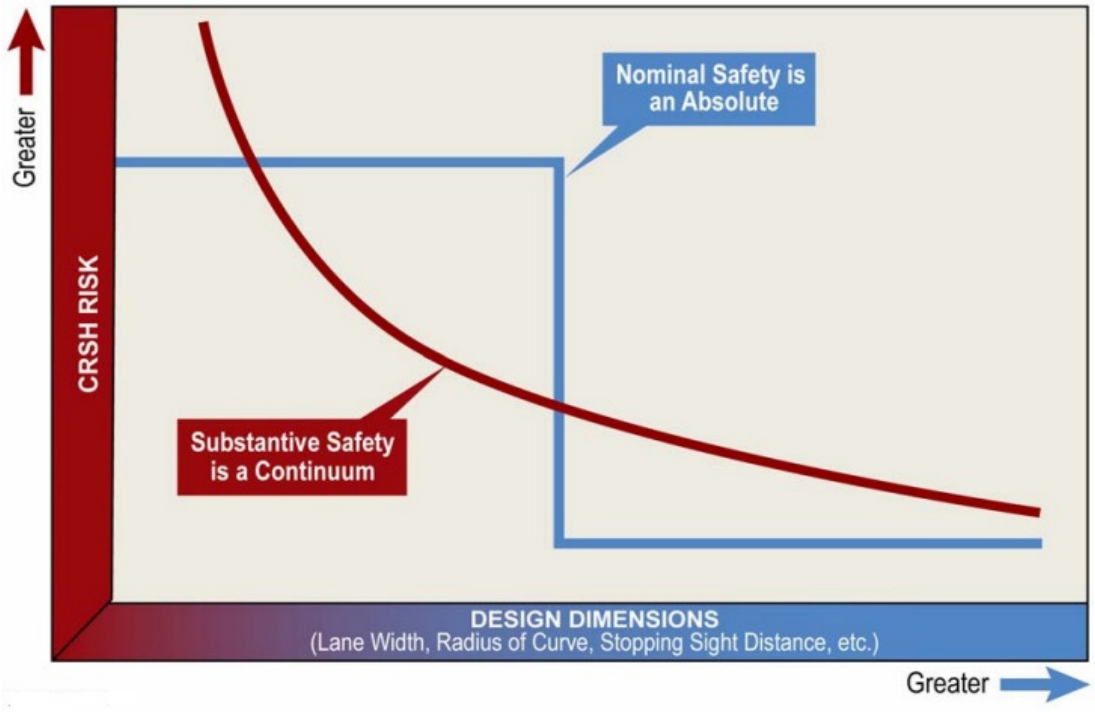

Figure 2: Comparison of Nominal and Substantive Concepts of Safety [1]

2.4 GDOT Design Exception Process

GDOT has mandated the use of AASHTO *Green Book* as the standard controlling criteria for its highway design projects. The GDOT PDP contains an in-depth explanation of the GDOT design exception process. According to the PDP, the GDOT chief engineer is required to approve a design exception prior to deciding on using a design value below AASHTO's minimum controlling criteria [5]. GDOT defines such deviation from one of the 13 controlling criteria as a design exception. When the deviation belongs to GDOT's additional criteria outside AASHTO's 13 controlling criteria, GDOT classifies it as a design variance. Design exceptions and design variances require similar approval and documentation processes. However, design exceptions must be authorized by the FHWA while design variances require final approval by the GDOT chief engineer.

In addition to the necessary documentation and information for requesting a design exception, the approval procedure is also described in the GDOT PDP. The first step involves the assigned engineer preparing the design exception request using GDOT's design exception/variance request form and submitting it to his or her project manager. Secondly, the project manager will submit the design exception request and all supporting information and documentation to the Office of Design Policy and Support. After reviewing the request, the Office of Design Policy and Support will turn in the design exception report to the director of engineering and chief engineer of the project for approval. If the project is on an interstate highway, the report will also be submitted to the FHWA. When the request is either approved or disapproved, it will be returned back to the Office of Design Policy and Support. Then, its original version will be sent to the general file while its copy will be forwarded to the project manager. When the project

manager stores the completed copy of the request in the project file, the record of the design exception will be entered into the department's project management system by the Office of Design Policy and Support [6].

The GDOT PDP recommends engineers to follow these important steps and also use FHWA's *Mitigation Strategies for Design Exceptions* paper for guidance. Other than this, GDOT currently does not clarify a specific monitoring process for evaluating the in-service performance and impact of design exceptions after highway construction.

2.5 Previous Design Exception Research

A limited number of design exception studies have been conducted in Washington, Kentucky, and Indiana. These research efforts on design exception processes are either ongoing or have already been completed. Also, two additional research projects on design exception are currently being done in Utah and National Cooperative Highway Research Program (NCHRP).

2.5.1 Washington

The Washington Department of Transportation (WSDOT) implemented an in-service monitoring program for evaluating the performance of a clear zone design exception. Clear zone is not one of the 13 controlling criteria as defined by AASHTO. Still, WSDOT observed a streetscape redevelopment project on state route 99 corridor which transformed a continuous two-way left-turn lane (TWLTL) to a raised median. An initial case study was done three years after the design exception was implemented and compared crash frequency and severity results before and after project construction.

Then, a statistical analysis was performed to examine the contributing factors to the crash frequency and severity. It revealed that the crash rate had decreased, but this change did not show enough statistical significance. The accident locations changed, however, as seen by increase in U-turn accidents and decrease in mid-block accidents [7].

In addition to the first analysis, a second study involved roadway segments built in later phases. The findings were consistent with those from the initial study [8]. As a result, this led to further studies and development of a rigorous in-service monitoring program. Similar to WSDOT, other transportation agencies find that they need to examine lessons learned and key impacts design exceptions pose on safety and performance of roadways [9].

2.5.2 Indiana

A study by Indiana Department of Transportation (INDOT) looked at the safety performance of design exceptions on the 13 controlling criteria. Similar to the WSDOT study, advanced statistical models were used to analyze crash severity and frequency at design exception project locations. The results showed no statistical significance between having a design exception and crash severity or frequency. Despite this lack of correlation the research suggested maintaining a database of design exceptions on the 13 controlling criteria. Such database could serve as a guiding precedent for future decisions on design exceptions [10].

2.5.3 Kentucky

In a study by Kentucky Transportation Center, 319 design exceptions between 1993 and 2000 were evaluated for any negative implications on safety performance. In particular, before and after crash data from 65 sampled project sites were analyzed. For all but six project sites, the after crash results indicated either a reduction from the before crash data or lower values compared to the state average crash rate after construction for the corresponding roadway type [11]. Unlike the INDOT study, this research did not consist of a statistical analysis but only a comparison between before and after crash rates. Focusing on crash rates, it recommended an ongoing monitoring program for finding changes in future crash frequency at project locations with design exceptions [11].

2.5.4 Additional Studies

Similar to the INDOT research, a study in Utah is analyzing crash frequency and severity of roadway segments with design exceptions. The crash data of roadway segments with design exceptions are then compared to crash data of similar roadway segments without design exceptions [12]. Statistical models are used to find any correlation between the two datasets.

The NCHRP is also participating in its own design exception research project, which is looking at various urban and rural road types and evaluating the impact of 13 controlling criteria on these roadway configurations [13]. Its main goal is to find how the 13 controlling criteria and safety performance are related and to decide if the criteria need

to be changed. For instance, the criteria could be added, removed, altered in value, or applied to other roadway types.

2.6 Highway Safety Manual

The Highway Safety Manual (HSM) offers the knowledge and means to "facilitate improved decision making based on safety performance" [14]. It contains valuable information and methodologies for measuring, estimating, and evaluating roadways with respect to their crash severity and crash frequency. Also, it considers safety across planning, programming, project development, construction, operations, and maintenance of roadway projects [14]. Before the release of the HSM, a resource on quantitative information on crash analysis and safety evaluation did not exist in the United States.

As a "science-based technical approach that takes the guesswork out of safety analysis" [15], the HSM predictive method can be used to quantify the change in crash rate as a result of design exception approval and additional safety mitigations. It contains a structured methodology for estimating the expected average crash rate of a site, facility, or road network for a given time period, traffic volumes, traffic control features, and geometric design [14]. Then, the estimated results can be compared to assess the safety performance of existing highway design and possible alternatives.

A major part of this research will focus on the applicability and effectiveness of the HSM in evaluating the design exceptions in Georgia. The predictive method will be used for design exceptions that have been approved previously. Finally, the estimated

crash rates will be compared to actual crash rates to determine whether an in-service monitoring program for GDOT can involve using the HSM.

CHAPTER 3

METHODOLOGY

GDOT currently utilizes a complex review process for approving design exceptions, but this does not incorporate an in-service monitoring program for evaluating the safety performance of design exceptions. This section of the thesis describes how to determine whether design exceptions historically are meeting the safety performance expectations. Due to constraints in data availability, crash data for only a select number of design exception projects was collected and analyzed. While the intention was to use the construction dates for finding the before and after crash frequencies, these dates were unknown at the time of this analysis. Therefore, the approval year was used as nominal cut-off date to determine the safety impacts of the design exceptions. Using this information, the HSM predicted method could be used in the future to estimate the before and after crash frequencies and compared to the actual values for accuracy.

3.1 Raw Design Exceptions Data

The original data file sent to Georgia Tech's Transportation Engineering Department by GDOT contains 467 design exceptions and 714 design variances from 1995 to 2011. It was used to identify and classify the design exception types and examine the completeness of design exception and design variance records and mitigation measures. Table 2 below presents the variables that were assigned by GDOT in the original dataset and their meanings.

Table 2: GDOT-assigned Fields in Raw Design Exception Data

Field	Description
PROJ_CNTY_PROJ_EXT_PROJ_ID	GDOT Project ID
DS	GDOT Project Title
ROUTE_COUNTY	County of design exception location
EXCEPTION_TYPE_CD	Code (1 – 13) indicating the GDOT design exception type: 1. Design Speed 2. Lane Width 3. Shoulder Width 4. Bridge Width 5. Structural Capacity 6. Horizontal Clearance / Lateral Offset 7. Vertical Clearance 8. Horizontal Alignment / Intersection Skew 9. Vertical Alignment 10. Cross Slope 11. Grade 12. Superelevation 13. Stopping Sight Distance Design Variance is indicated by number 30.
APPROVED_DT	Date of design exception approval
COMNT	Detailed comments from GDOT on design exception
RC_LINK	A combination of {County Code, **Route Type**, and Route Number} (SR=1, CR=2, CS=3, PR=8) Ex: 121**2**000400 (121 **2** 000400) County Code = 121 (Fulton) Route Type = 2 (CR) Route Number = 000400 (4) [16]
MPOINT_ROUTE	GDOT-assigned route number
MPOINT_BEG	Beginning mile post of design exception location
MPOINT_END	Ending mile post of design exception location

The original file contained three separate Microsoft Excel spreadsheet tabs. Hence, a quality assurance and quality control (QA/QC) analysis was performed to find any differences between the three tabs. While sheets 1 and 2 tabs were identical, they included nine entries without project ID and project title. These entries were not included in sheet 3 tab, so the data from this sheet was used as the raw dataset for this research. Also, because this research focuses on only design exceptions, design variance records were not included in the raw dataset. It was also found that the column ROUTE_COUNTY had been filled in for a few projects. GDOT's State Traffic and Report Statistics (STARS) database [16] was used to confirm the county names matched the RC_LINKs. One error was found in project 753170-, which indicated Fulton County while its RC_LINK denoted DeKalb County. Appendix B notes this correction, as Appendix A shows the original design exception dataset prior to any data additions and changes.

Similar to ROUTE_COUNTY, the MPOINT_BEG and MPOINT_END columns were also given for only some of the projects. The missing ROUTE_COUNTY, MPOINT_BEG, and MPOINT_END values were found in the crash data collection process. The design exception codes in the EXCEPTION_TYPE_CD column were interpreted to obtain the specific design exception types based on the COMNT column written by GDOT. It was found the order of GDOT's 13 design exception categories is different than AASHTO's 13 controlling criteria. GDOT's order of design exception types is shown in Table 2. The order of the following 6 types remained the same: design speed, lane width, shoulder width, bridge width, structural capacity, and cross slope.

3.2 Crash Data Collection

To acquire the before and after crash data for design exceptions in Georgia, the Critical Analysis Reporting Environment (CARE) was used. As previously mentioned the crash data collected in this research pertains to all roadway segments within the projects and is not necessarily related to the design exceptions. Future efforts will be required to explore potential connections between the crash rates and design exceptions.

Developed by the Center for Advanced Public Safety (CAPS) at University of Alabama, CARE is a data analysis software "designed for problem identification and countermeasure development in traffic safety operations" [17]. The CAPS website was used to download the Georgia accident database for years 2000 to 2009, which was generated based on the accident records from police reports. Crash data for years 1995 to 1999 and beyond 2009 were not available and not considered in this study. One main objective of this research is to analyze the change in crash rates 3-years before and 3-years after project implementation. Therefore, a total of 184 design exceptions that were approved from 2003 to 2008 were chosen for crash data collection and analysis.

In order to obtain the crash data at a particular location, the following variables needed to be known: county, route type, route number, begin milepost, and end milepost. Although the county names were not directly given by the raw data, the RC_LINKs of the projects could be used to locate the counties. GDOT's STARS was used to accomplish this task by matching the first 3 digits of the RC_LINK to the corresponding county names [16]. The route type was indicated in the project title column, and the route number was shown in the MPOINT_ROUTE column in the raw dataset. It was found that the route numbers for projects 0000104, 0002848, and 0006989 were 0 and their

RC_LINKs did not exist on STARS. Because they could not be located, they were excluded from the sample design exception dataset which brought the sample size to 179 design exceptions. Also, the route numbers provided by GDOT for projects 323075-, 752020-, and 753170- were actually different on CARE. They were changed from 138 to 155 for project 323075-, 661 to 1029 for project 752020-, and 155 to 260 for project 753170-. These discrepancies were corrected and noted in Appendix B.

The beginning and ending mile post (MP) for each roadway segment needed to be known, but the raw dataset did not provide them for all roadway segment design exceptions. To look for the missing MPs, project IDs were used to access the GDOT's Transportation Project Information (TransPi) online search engine [18] and search for their design documents. Only some of the projects' design documents explicitly showed the beginning and the ending MPs. For obtaining the unknown MPs and validating the GDOT-assigned MPs, roads and highways database and shapefiles for each county were downloaded from Georgia Geographic Information System (GIS) Data Clearinghouse website [19] then mapped using ArcGIS. It is important to note that the obtained MPs were approximated and may not be completely accurate. However, on CARE the crash locations are shown on a Google-map panel after specific MPs are selected. This was used to ensure that all MPs corresponded to the project location descriptions included in the raw design exceptions dataset.

Another major issue was detected in the MPs for interstate highways. In CARE the MP begins from 0 at the county border, but some of the MPs for interstate design exceptions in the raw dataset suggested that they begin and end at the state borders. This was confirmed as the MPs increased northward from Georgia-Alabama and Georgia-

Florida borders to Georgia-Tennessee and Georgia-South Carolina borders and eastward from Georgia-Alabama border to Georgia-South Carolina border. Due to this inconsistency in the MP values between CARE and the raw dataset, certain MPs had to be adjusted by finding the approximate distance between the state border and the county border on Google Earth [19] and subtracting this distance from the given MPs in the raw dataset. For example, project 0005071's is on I-95 in Glynn County with GDOT-assigned beginning and ending MPs of 33.56 and 33.66, respectively. On CARE this location could not be searched based on these MPs. This called for measuring the approximate distance between the Georgia-Florida border on I-95 and the southern border of Glynn County, which was 27.70 miles. Subtracting this value from the original beginning and ending MPs, the new MPs were 5.86 and 5.96. In this way, the estimated MPs allowed searching for the correct project location and crash frequencies. The design exceptions with GDOT-assigned MPs, newly estimated MPs, and MPs obtained from GDOT's design documents are grouped and shown separately in Appendix B.

3.3 Crash Data Analysis

After the data collection was completed, the next step was to become familiar with the crash data itself. A detailed Excel report containing all crashes from 2000 to 2009 was generated for each design exception project on CARE. Each accident record is denoted by a unique 8-digit case number, and the first digit indicates the crash occurrence year ranging from 0 to 9. Based on the crash dates provided, the total annual crash frequencies were computed and plotted.

In addition to examining the total crashes, the separate analyses were conducted according to the following groups: design exception, crash severity, and crash type. For each design exception type, the annual crash rates were plotted to find which design exceptions were dominant and how they seemed to affect roadway safety. It is important to note that some projects were included in multiple design exception categories because they contained multiple design exception types. Based on the CARE-generated reports, there were three distinct crash severity types: fatal, non-fatal injury, and property damage only (PDO) crashes. Unlike crash severity, the CARE reports did not reveal the specific crash types. This required obtaining the annual sanitized crash data files from doctoral student Lakshmi Peesapati. Each year's crash records from police reports in Georgia could be accessed in the databases. More importantly, there was a field called "Manner of Collision" which indicated the crash type with numbers 1 – 6. Table 3 below explains the specific crash types indicated by each code.

Table 3: Crash Types Based on Sanitized Crash Data

	Crash Type
1	Angle
2	Head On
3	Rear End
4	Sideswipe-same direction
5	Sideswipe-opposite direction
6	Not with a motor vehicle

Even though the crash types were obtained, they still needed to be checked for accuracy. The accident records were cross-checked with their corresponding case numbers and other relevant information found in CARE reports. Three main fields on CARE reports were used to arrive at the crash types: direction of travel, maneuver, and point of impact of each vehicle involved in the accident. Table 4 below shows a description of all the possible values for each field.

Table 4: CARE Fields Used for Finding the Crash Types

Variable	Description
Direction of Travel	1- North 2- South 3- East 4- West No Second Vehicle Null
Maneuver	1- Turning Left 2- Turning Right 3- Making U-Turn 4- Stopped 5- Straight 6- Changing Lanes 7- Backing 8- Parked 9- Passing 10- Negotiating a Curve 11- Entering/Leaving Parking 12- Entering/Leaving Driveway No Second Vehicle Null

Table 4 continued

Point of Impact	0- Overturned 1- Passenger Front Fender 2- Passenger Front Door 3- Passenger Middle 4- Passenger Rear Door 5- Passenger Rear Fender 6- Rear End 7- Driver Rear Fender 8- Driver Rear Door 9- Driver Middle 10- Driver Front Door 11- Driver Front Fender 12- Front End 13- Top 14- Undercarriage 15- Non-contact Vehicle No Second Vehicle Null

For instance, in one accident two vehicles were moving northward and southward and one was making a left-turn movement while the other was going straight. After checking the point of impacts which were passenger middle and front end, this particular crash was concluded as an angle type. Also, in another accident two vehicles were going in the same direction and straight, while the point of impacts were front end and rear end. This type of crash was considered a rear end type. In this way, the crash types obtained from the sanitized accident databases were validated using the CARE reports for all records.

The next step was to conduct a comparative analysis of the crash data before and after design exception implementation. Essentially, the annual crash frequencies for the design exception approval year were skipped and the results from 3-year periods before and after that year were studied. For instance, if a design exception of a project was approved in 2005, then the crash data for years 2002-2004 and 2006-2008 would be examined. Because of the random nature of crashes, the average annual crash frequencies for both 3-year periods were calculated and plotted for total crash data and by design exception, severity, and crash type. During this analysis two important assumptions were made. First, it was found that 12 projects experienced less than 10 total crashes from 2000 to 2009, meaning that the average annual crash was less than 1. The crash results for these design exception projects were obtained, but they were not considered in the before-and-after average analysis. Also, at 6 projects the 10-year total exceeded 3650 crashes, indicating that the average daily crash frequency was greater than 1 per day. For example, a total of 16469 accidents from 2000 to 2009 occurred on project 0006402, but the roadway length was nearly 20 miles. The scope of these major projects potentially exceeded the particular design exceptions significantly. Without additional detailed design/construction plans it was not possible to determine the area containing the design exception. While these projects were excluded for this analysis, they should be reviewed once additional design data is available.

After all the before and after average crash frequencies were plotted, they were compared to assess the impact of design exception based on the change in the 3-year crash results. If the average number of accidents decreased after design exception approval, it is likely that the design exception, as part of the overall project, did not lead

to safety problems at the project location. Meanwhile, if the average increased after design exception, then a further investigation would be needed for analyzing other sources of safety risks. The observed crash patterns could help determine the nature of the problem and develop appropriate solutions to reduce crashes. In this way, the before and after crash analysis could serve as a first cutoff point before taking further action.

CHAPTER 4

RESULTS

4.1 Summary of Design Exceptions Data

4.1.1 Raw Data

GDOT's raw design exceptions Excel file contained a total of 467 design exceptions from 1995 to 2011, with 89 roadway projects being flagged with multiple design exceptions. A total of 714 design variances were also included in the raw dataset, but they were not considered in this research. The design exception counts by their types and by their approval years are shown in Table 5 and Table 6 below.

Table 5: Number of GDOT's Design Exceptions by Type

GDOT's Design Exception Code	Design Exception Type	Count
1	Design Speed	13
2	Lane Width	40
3	Shoulder Width	88
4	Bridge Width	14
5	Structural Capacity	0
6	Horizontal Clearance/Lateral Offset	33
7	Vertical Clearance	4
8	Horizontal Alignment/Intersection Skew	81
9	Vertical Alignment	120
10	Cross Slope	2
11	Grade	24
12	Superelevation	20
13	Stopping Sight Distance	28
	Total	**467**

Table 6: Number of GDOT's Design Exceptions by Year

Year	Count
1995	22
1996	23
1997	20
1998	17
1999	27
2000	15
2001	19
2002	16
2003	28
2004	26
2005	46
2006	24
2007	20
2008	40
2009	15
2010	28
2011	23
No Date	58
Total	**467**

The most common design exception types were vertical alignment, shoulder width, and horizontal alignment / intersection skew. Only 6 design exceptions belonged to cross slope and vertical clearance types, while structural capacity was not represented at all in the raw dataset. Among the yearly counts, 58 design exceptions were without specified approval dates. The reason for this lack of information was not known. Regarding the design exception counts, they appear to be somewhat randomly distributed with the maximum number of design exceptions occurring in year 2005. From 2007 to 2008 the number of design exception approvals doubled from 20 to 40, while it decreased to 15 from 2008 to 2009. Details on individual design exceptions and their corresponding

roadway projects can be found in Table 9 in Appendix A.

4.1.2 Sample Data

The final sample data consisted of 179 design exceptions that were approved from 2003 to 2008. A total of 111 roadway projects were observed, with 29 being flagged with multiple design exceptions. The sample design exception counts by their types are shown in Table 7 below.

Table 7: Number of Sample Design Exceptions by Type

GDOT's Design Exception Code	Design Exception Type	Count
1	Design Speed	3
2	Lane Width	3
3	Shoulder Width	39
4	Bridge Width	2
5	Structural Capacity	0
6	Horizontal Clearance/Lateral Offset	12
7	Vertical Clearance	3
8	Horizontal Alignment/Intersection Skew	38
9	Vertical Alignment	59
10	Cross Slope	0
11	Grade	5
12	Superelevation	3
13	Stopping Sight Distance	12
	Total	**179**

The most common design exception types were vertical alignment, shoulder width, horizontal alignment / intersection skew, as in the full raw dataset. Structural capacity and cross slope types were not represented, and none of the counts in other types

exceeded 12. Also, in the sample design exceptions data the issue over the missing MPs was addressed. A total of 110 design exceptions included MPs assigned by GDOT, but the MPs for only 69 of them could be used to find the accident data on CARE. The MPs for the other 41 design exceptions needed to be adjusted to MP values in which the MP begins from 0 at the corresponding county or state border. There were 69 design exceptions without MPs provided by GDOT, and the MPs for 25 of them were obtained from design documents on GDOT's TransPi website. The MPs for the remaining 44 design exceptions were estimated using ArcGIS, CARE, and Google Earth. Details on individual design exceptions and their corresponding roadway projects can be found in Tables 10 – 13 in Appendix B.

4.2 Aggregate Crash Data

The accident data was collected for 111 roadway projects with design exceptions. Because of the high variability in crash data, the 3-year average annual crash frequency results before and after design exception approval date were plotted instead of the annual values from 2000 to 2009. To show the results more clearly, different plots were used depending on the range of data and whether the projects had a decrease or increase in average crash frequencies. Figures 3 and 4 below show projects that had a lower number of crashes after design exception implementation, while projects in which the average number of crashes went up are shown in Figures 5 and 6. Also, Figures 3 and 5 include lower crash frequency ranges while Figures 4 and 6 focus on results in the higher ranges. This plot generation method was used in cases where the data included a wide range of crash counts and high sample size.

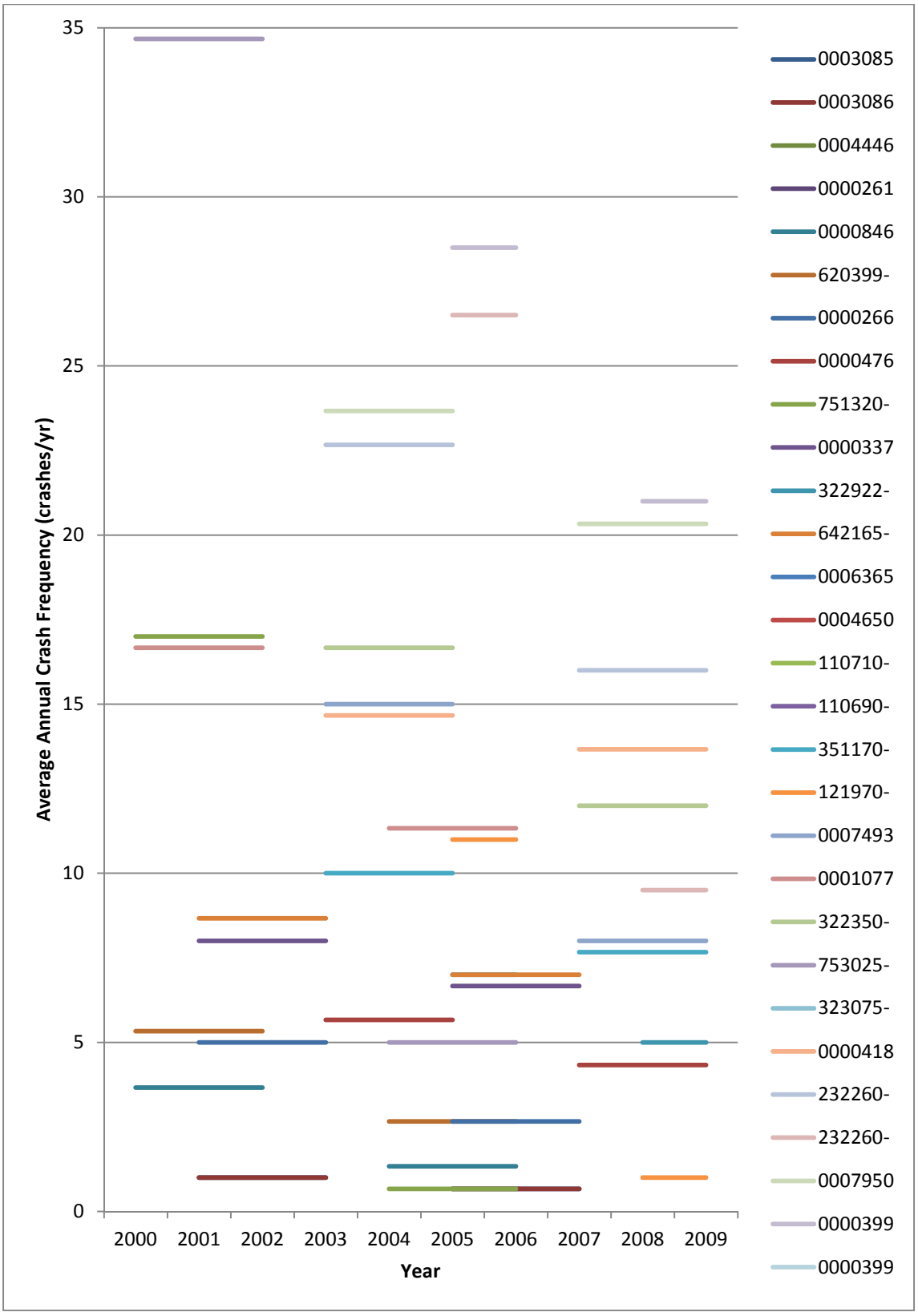

Figure 3: Projects with Reduction in Average Annual Crashes Results (0-35 crashes/yr)

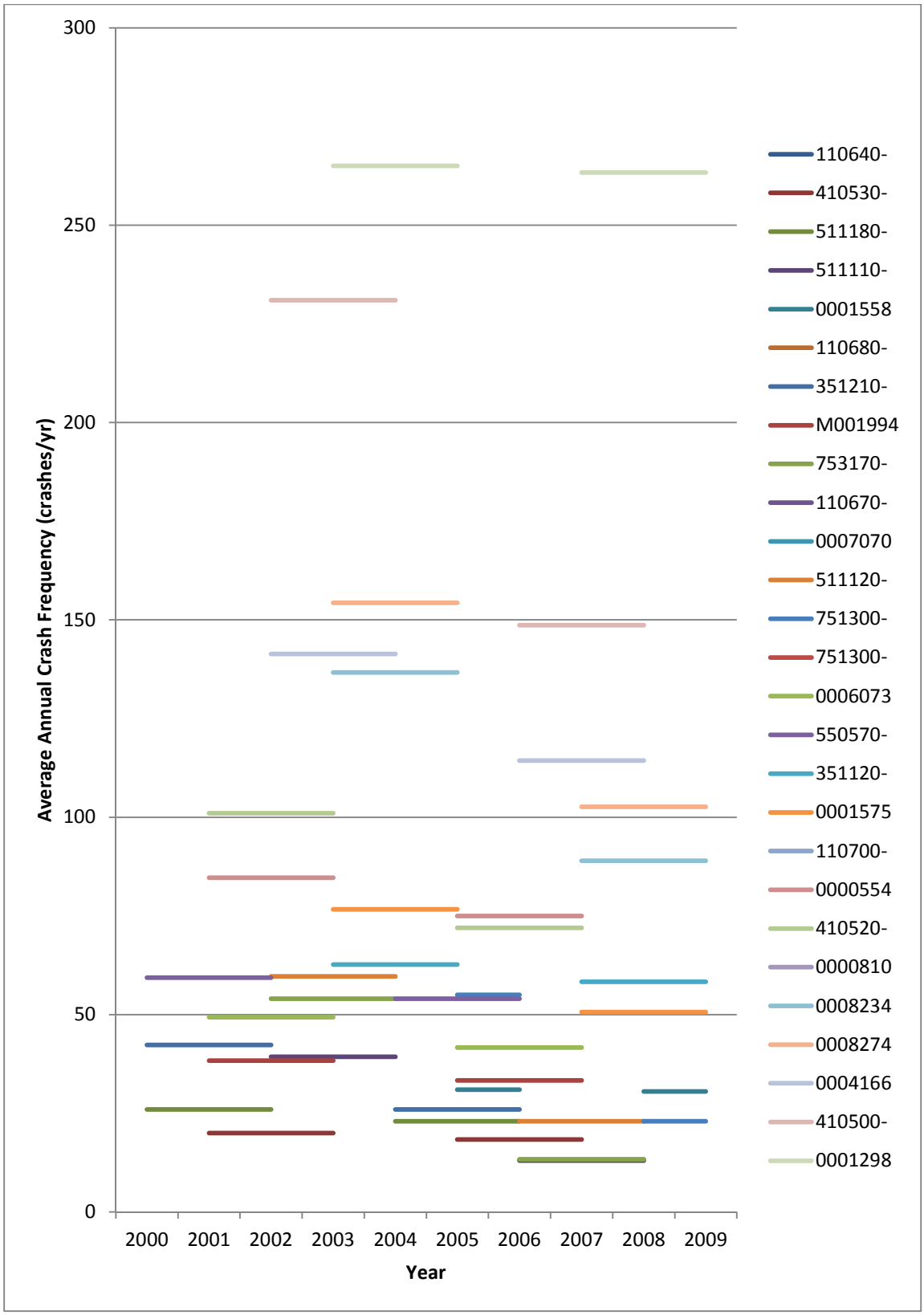

Figure 4: Projects with Reduction in Average Annual Crash Results (13-265 crashes/yr)

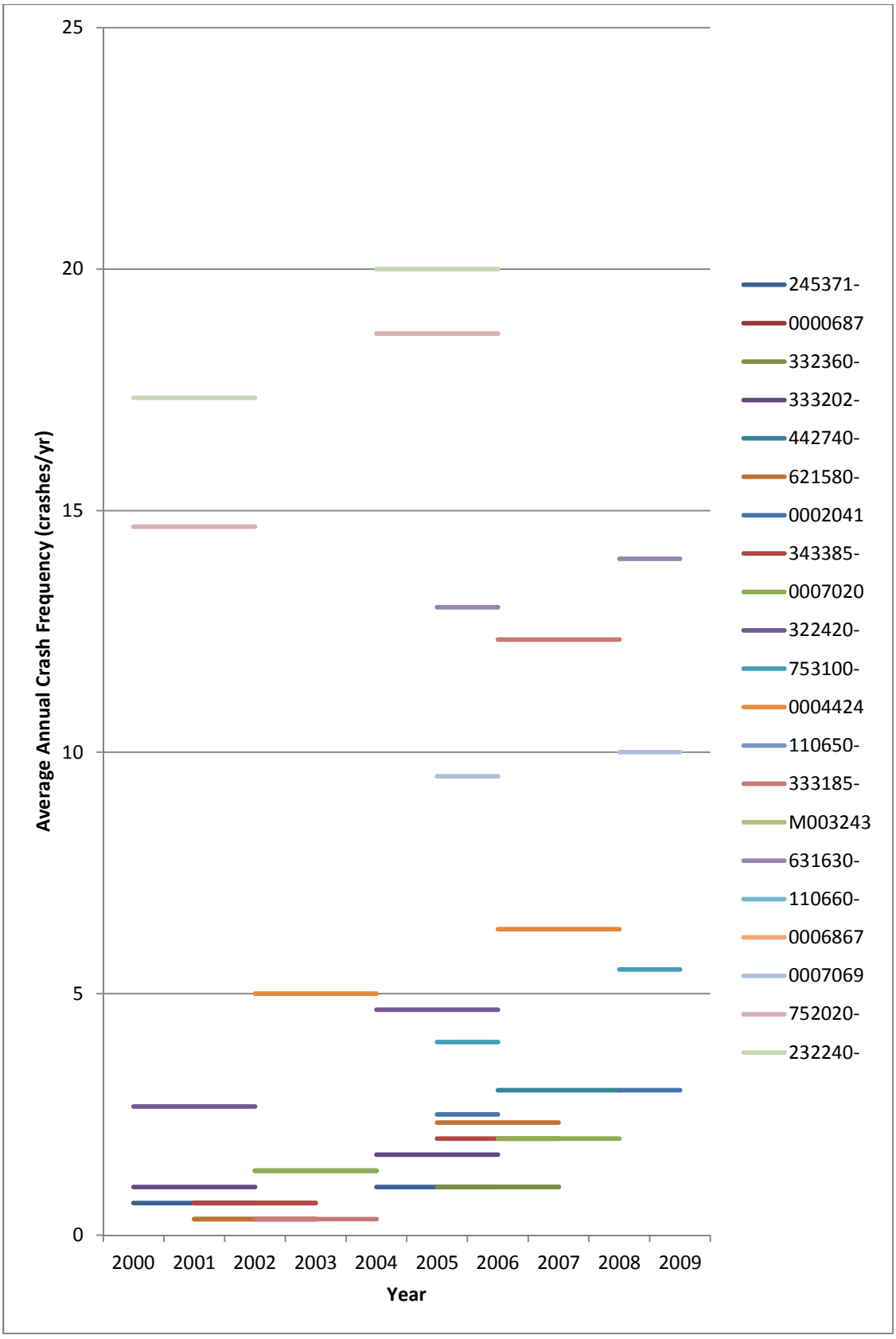

Figure 5: Projects with Increase in Average Annual Crash Results (0-20 crashes/yr)

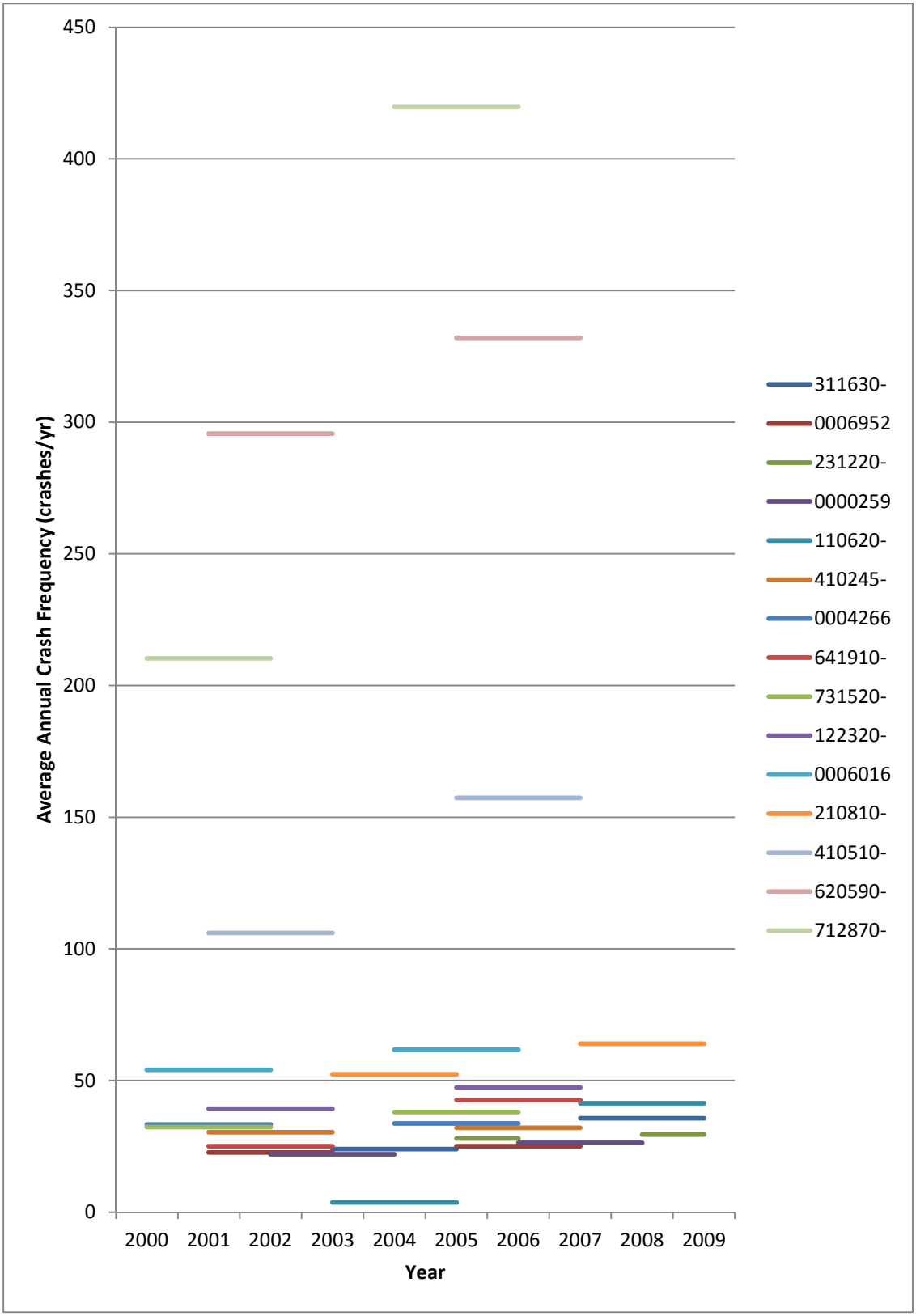

Figure 6: Projects with Increase in Average Annual Crash Results (0-420 crashes/yr)

In this total crash analysis, the before and after average analysis did not consider the design exception projects in which the total 10-year crash frequencies were less than 10 and greater than 3650, as discussed previously. Design exceptions from 96 separate approval dates were observed, and the average crash results after implementation decreased for 56 design exceptions. There was no change in the 3-year before and after averages for 4 design exceptions. Average crash frequencies for 36 design exceptions increased after design exception approval. The yearly crash frequency counts and the averages can be found in Table 14 Appendix C. It is critical to note that the data collected in this analysis represents crashes over the project route lengths beyond the design exception sites. Therefore, the annual aggregated crash data may not be tied to the design exceptions themselves. A potential relationship between the design exceptions and the crash data will be investigated in future studies.

4.3 Categorical Crash Data

4.3.1 Design Exception

Figure 7 below presents the total crash occurrences in the sample dataset divided by design exception type. If a project contained more than one design exception, it was represented in multiple design exceptions in Figure 7. The most common design exception types are shoulder width, horizontal alignment / intersection skew, vertical alignment, and stopping sight distance. While there were only 12 stopping sight distance design exceptions, total number of crashes in this category was the 4th highest. These graphs represent an initial analysis of the design exception distribution. This analysis does not consider project size, impact of multiple design exception, project AADT, or

other potential confounding factors. Future efforts will attempt to provide a more in-depth analysis capturing these issues. The 3-year before and after average crash results are plotted in Figures 8 – 22 below. It is again noted that while before and after project approval dates are utilized in this analysis, once data becomes available future studies will explore before and after the construction dates.

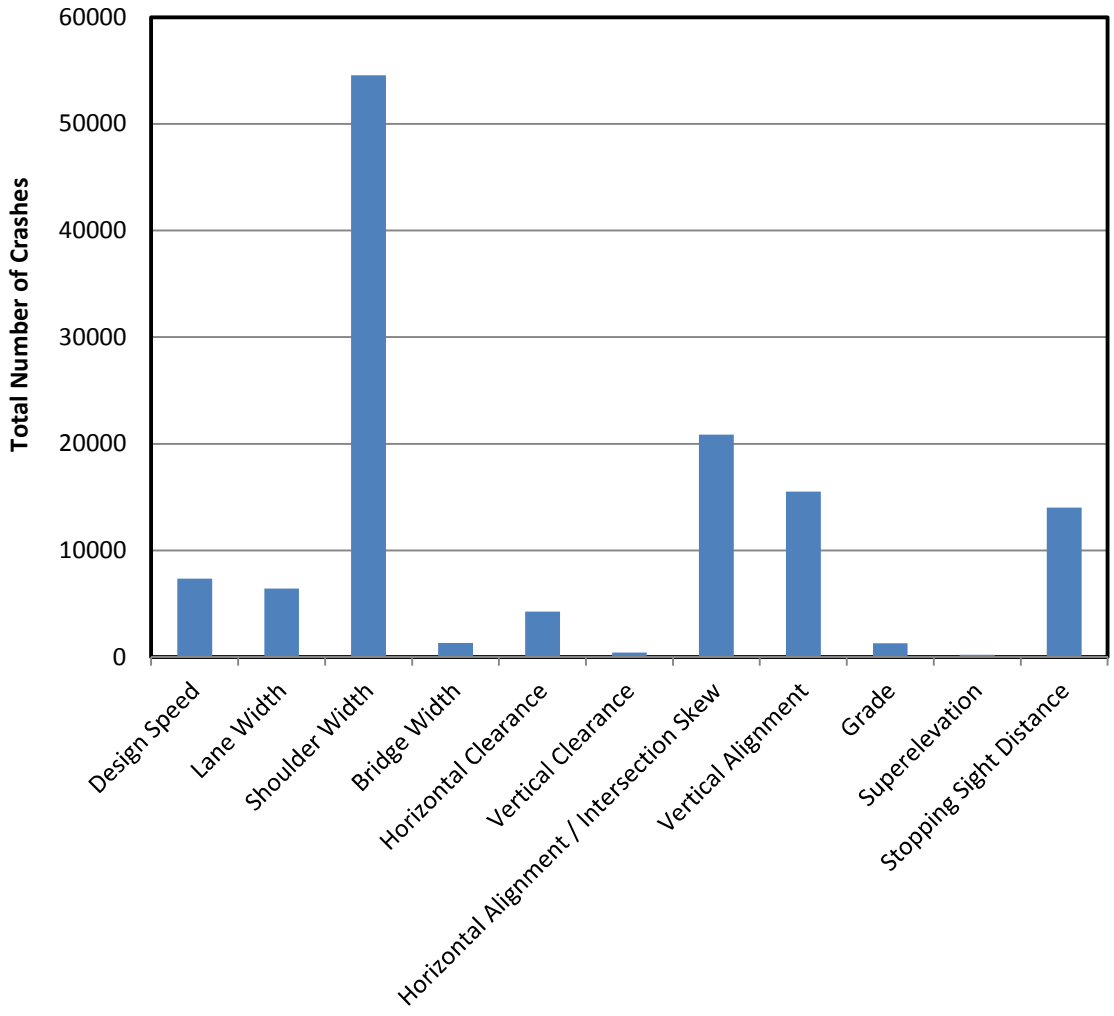

Figure 7: Total Crash Frequencies by Design Exception

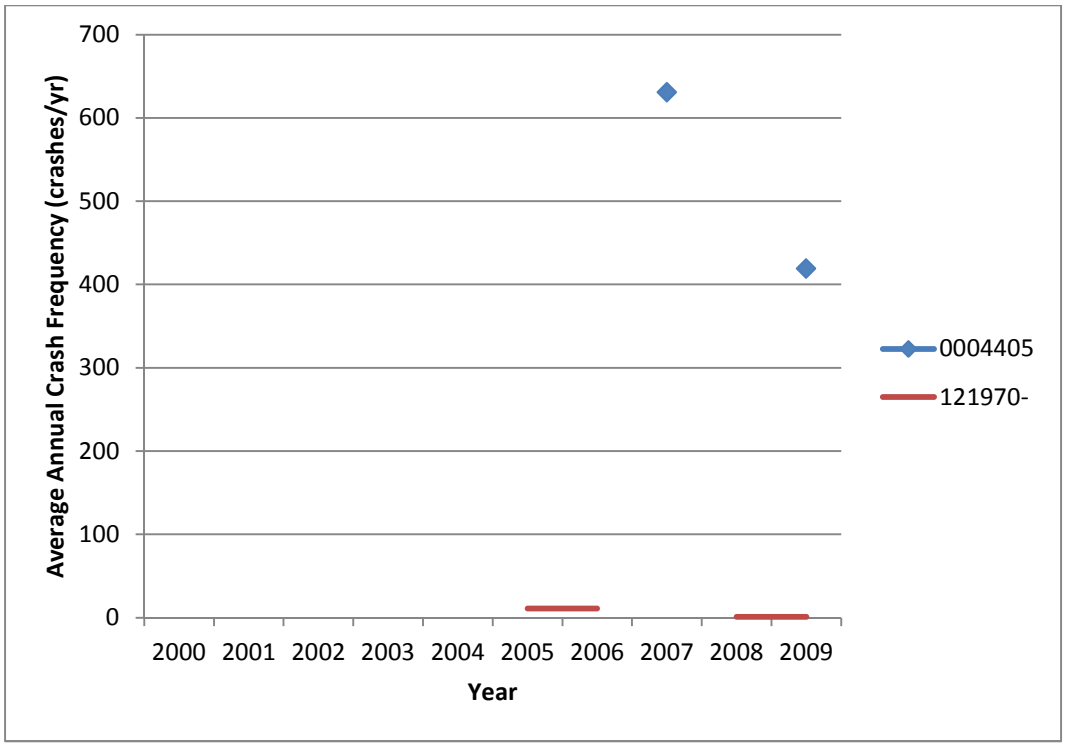

Figure 8: Projects with Average Annual Crashes Containing Design Speed Design Exception

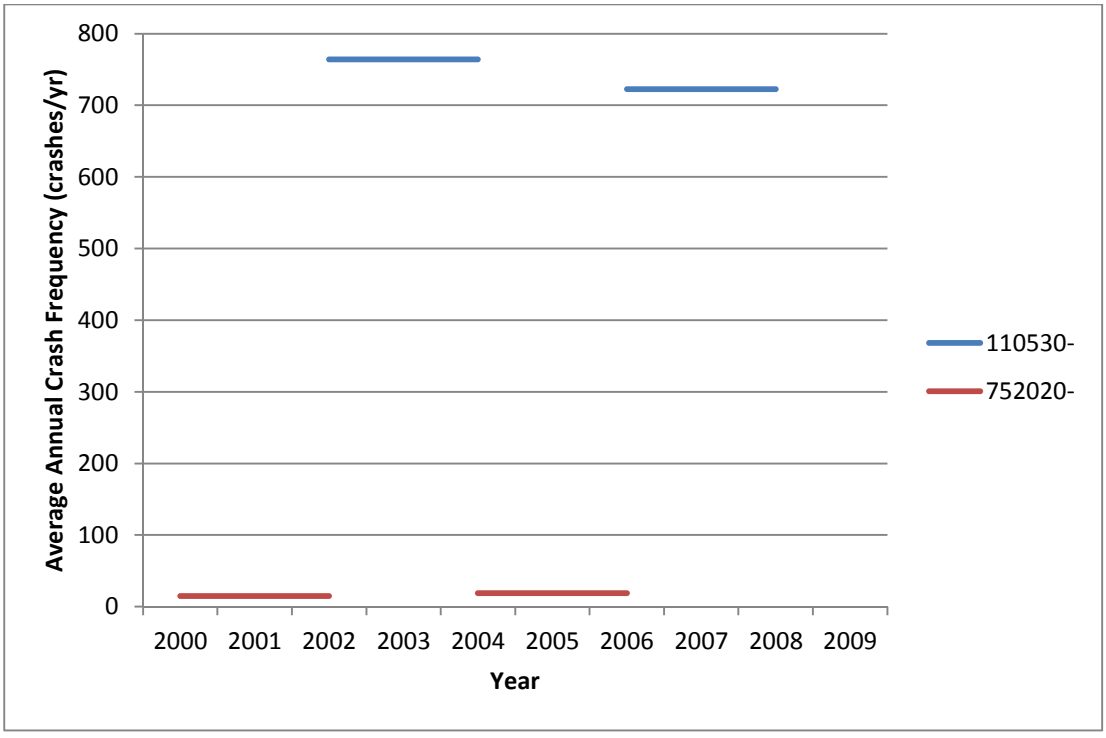

Figure 9: Projects with Average Annual Crashes Containing Lane Width Design Exception

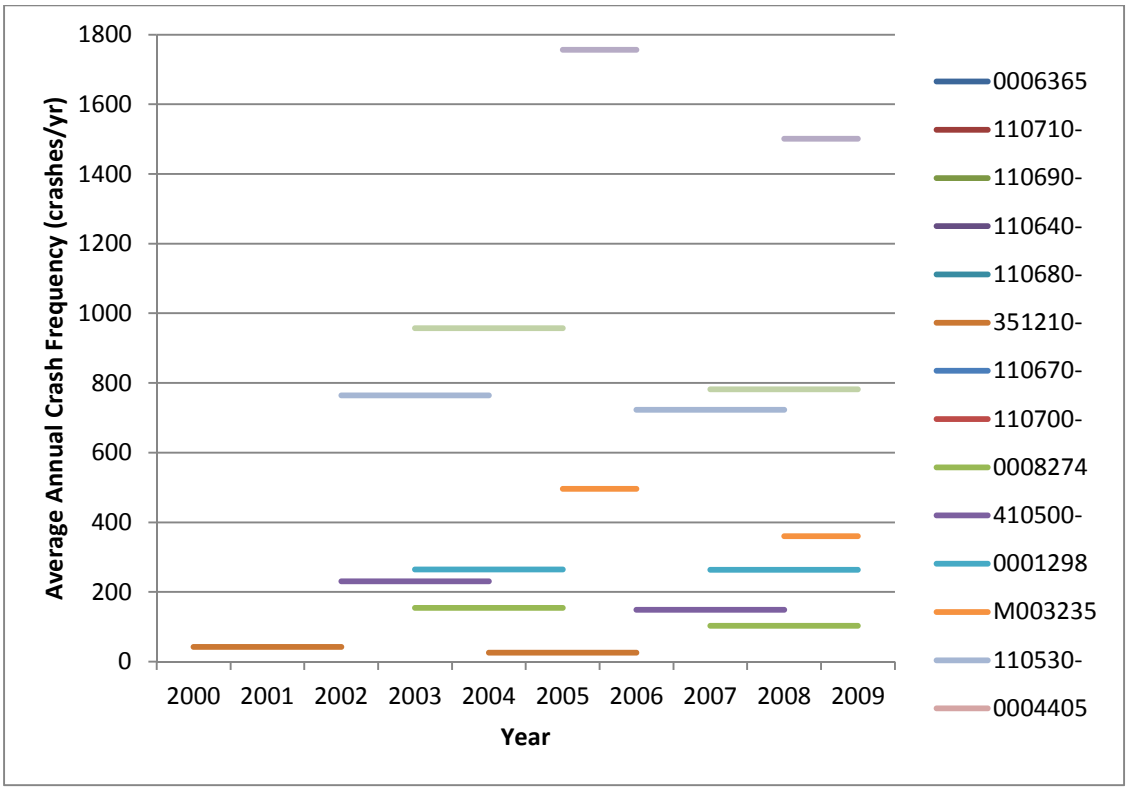

Figure 10: Projects with Decrease in Average Annual Crashes Containing Shoulder Width Design Exception

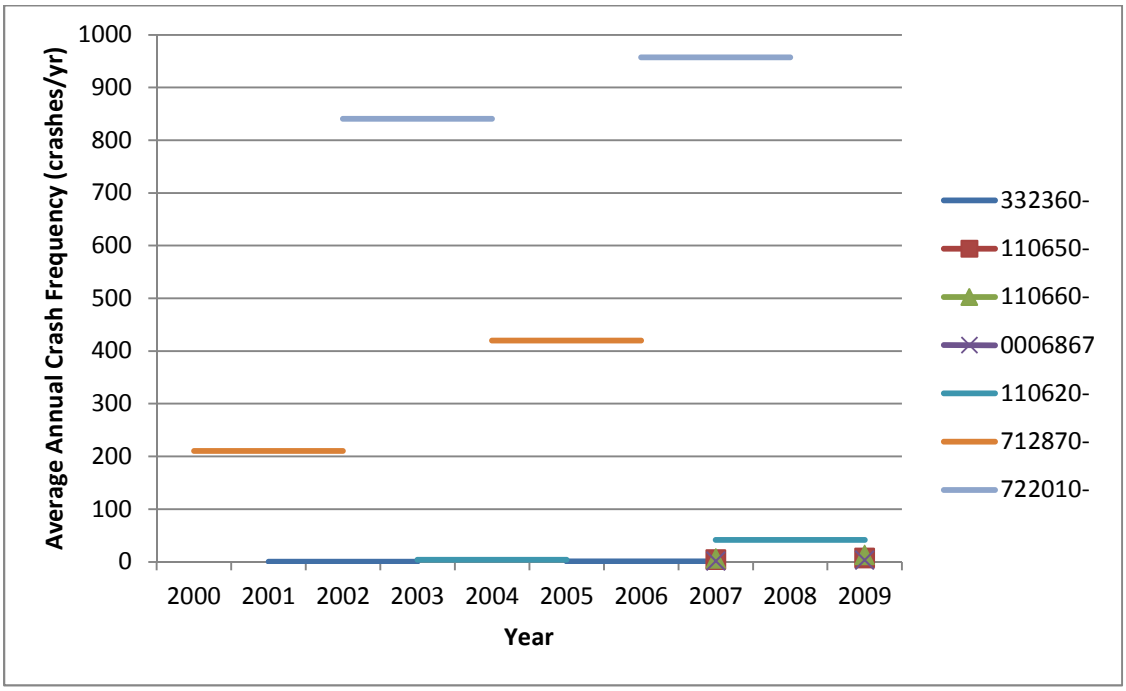

Figure 11: Projects with Increase in Average Annual Crashes Containing Shoulder Width Design Exception

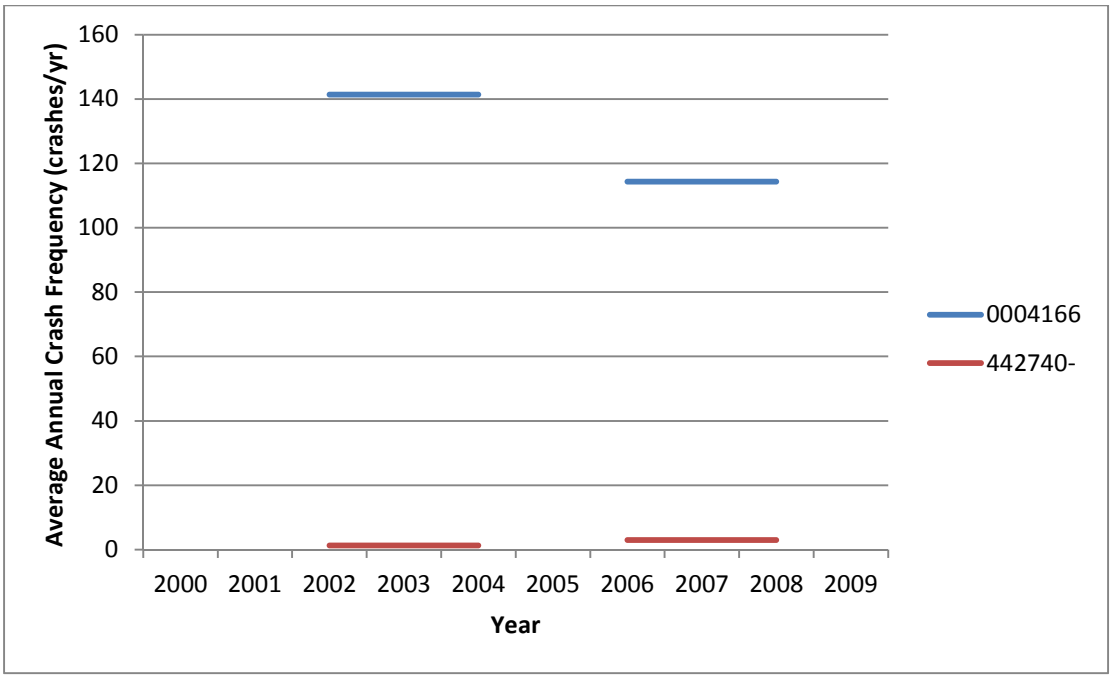

Figure 12: Projects with Average Annual Crashes Containing Bridge Width Design Exception

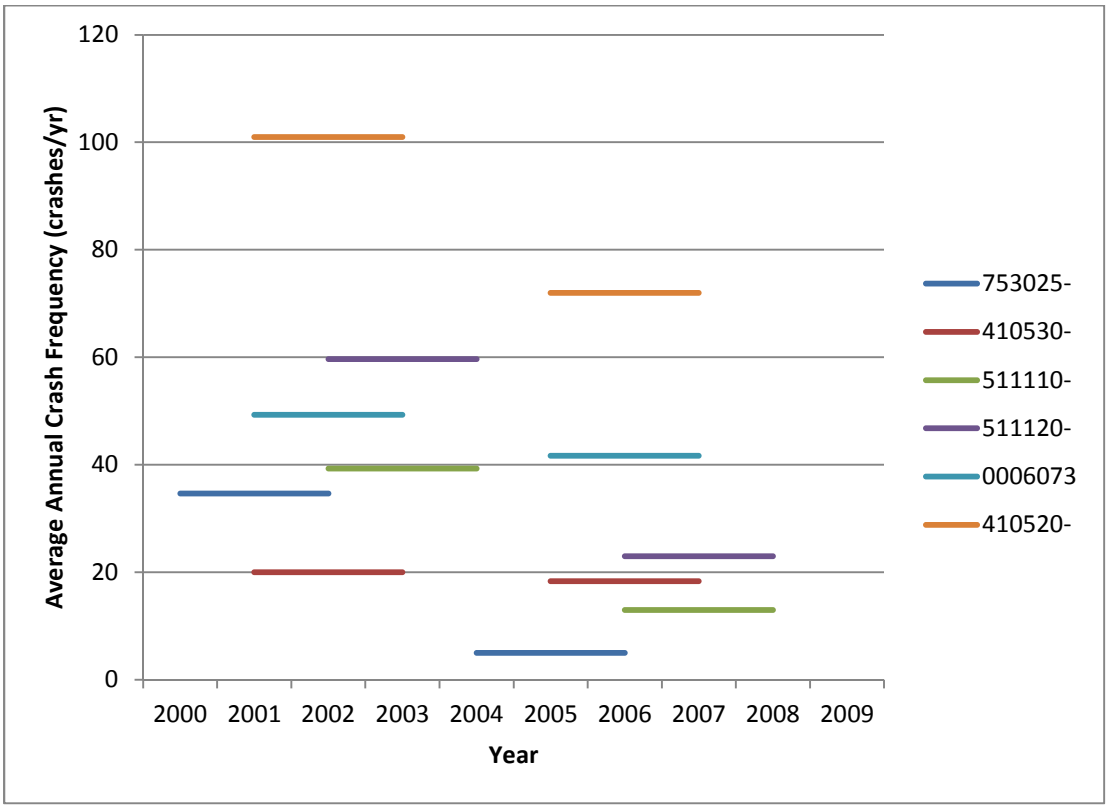

Figure 13: Projects with Decrease in Average Annual Crashes Containing Horizontal Clearance Design Exception

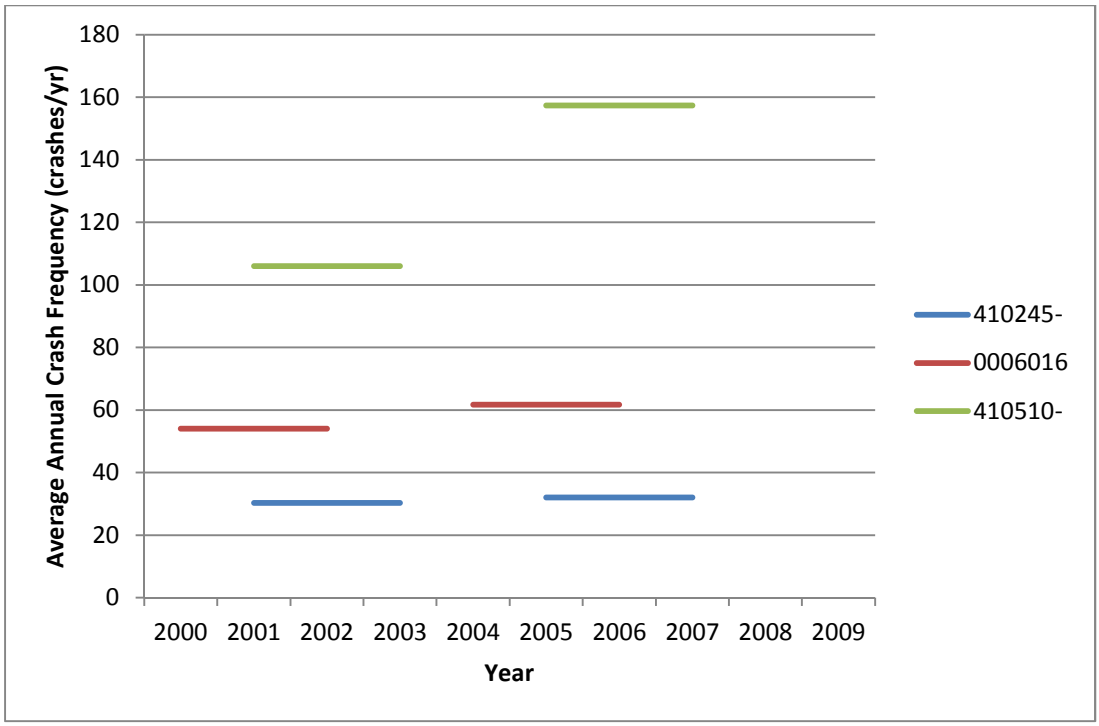

Figure 14: Projects with Increase in Average Annual Crashes Containing Horizontal Clearance Design Exception

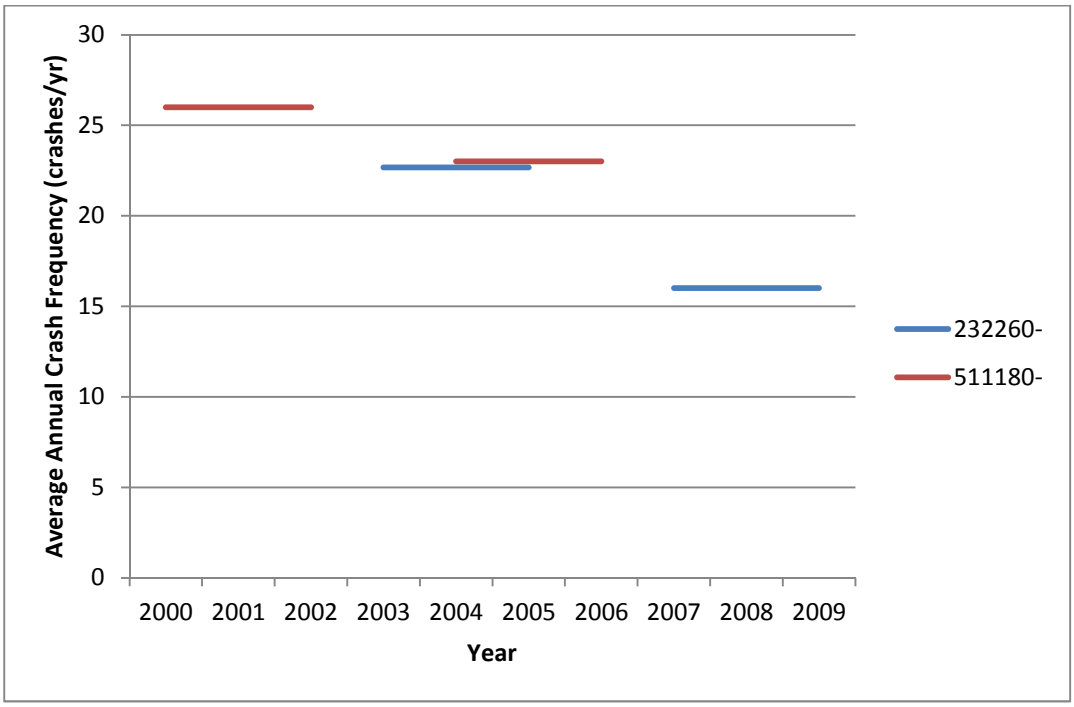

Figure 15: Projects with Average Annual Crashes Containing Vertical Clearance Design Exception

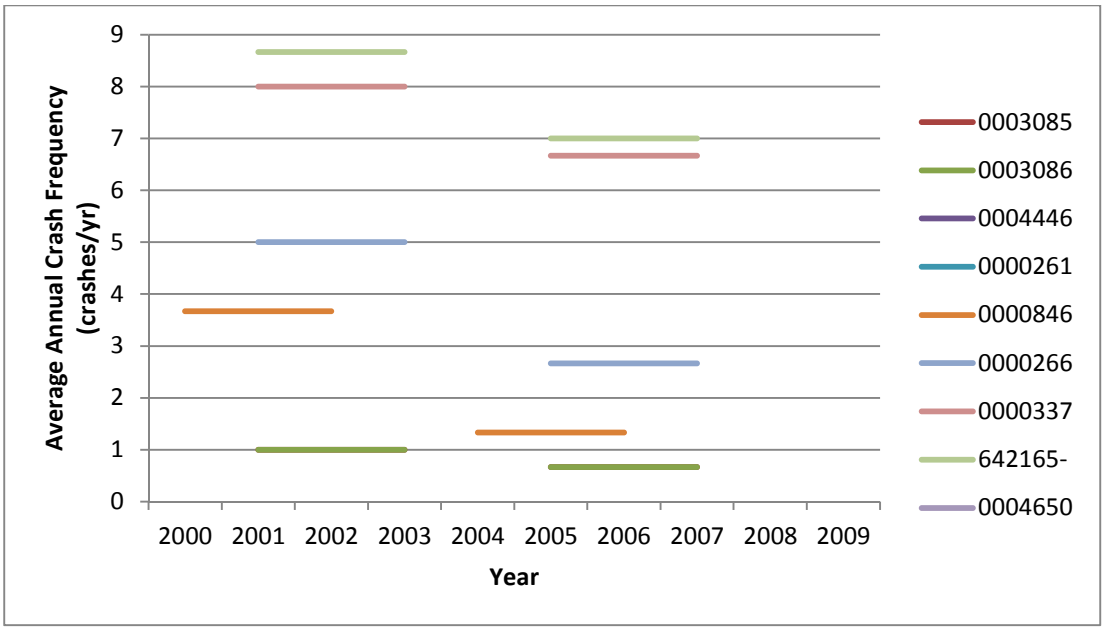

Figure 16: Projects with Decrease in Average Annual Crashes Containing Horizontal Alignment / Intersection Skew Design Exception

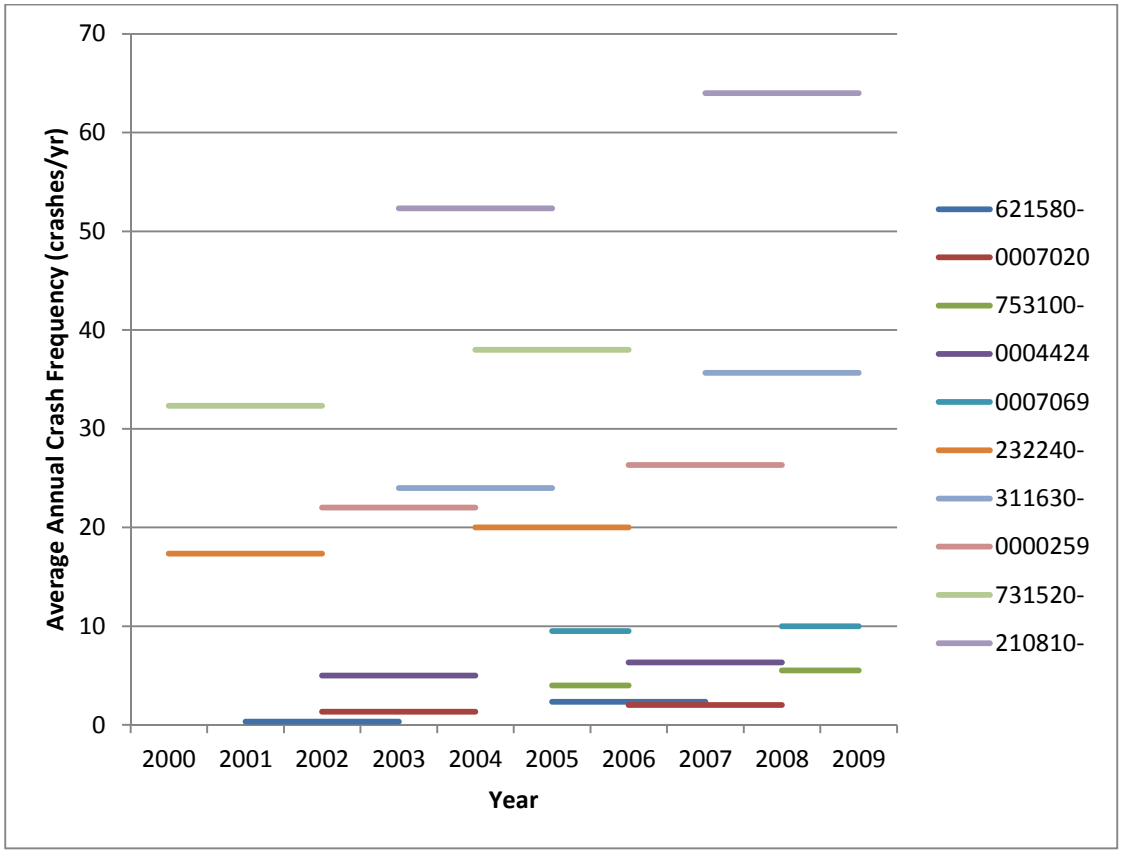

Figure 17: Projects with Increase in Average Annual Crashes Containing Horizontal Alignment / Intersection Skew Design Exception

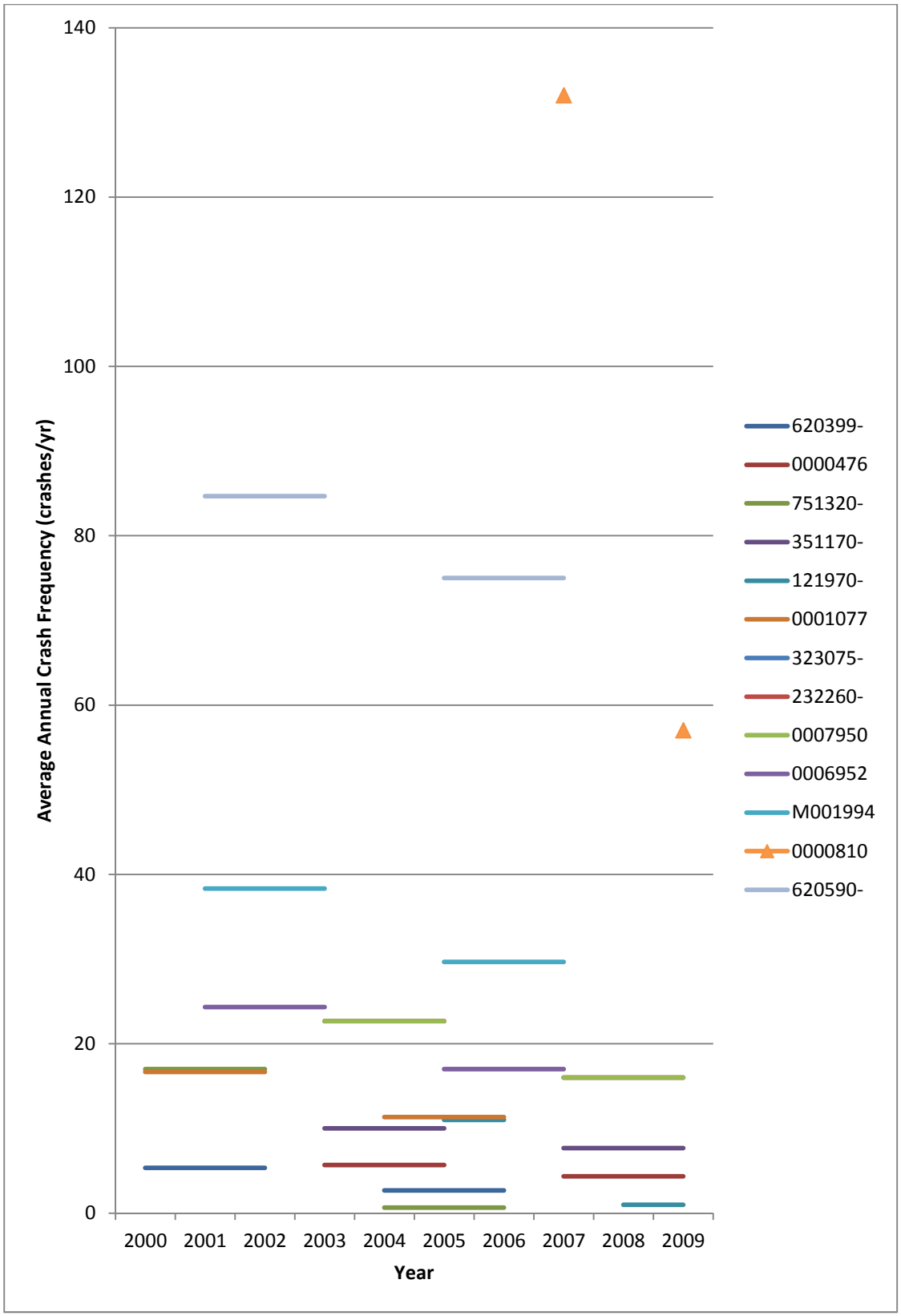

Figure 18: Projects with Decrease in Average Annual Crashes Containing Vertical Alignment Design Exception

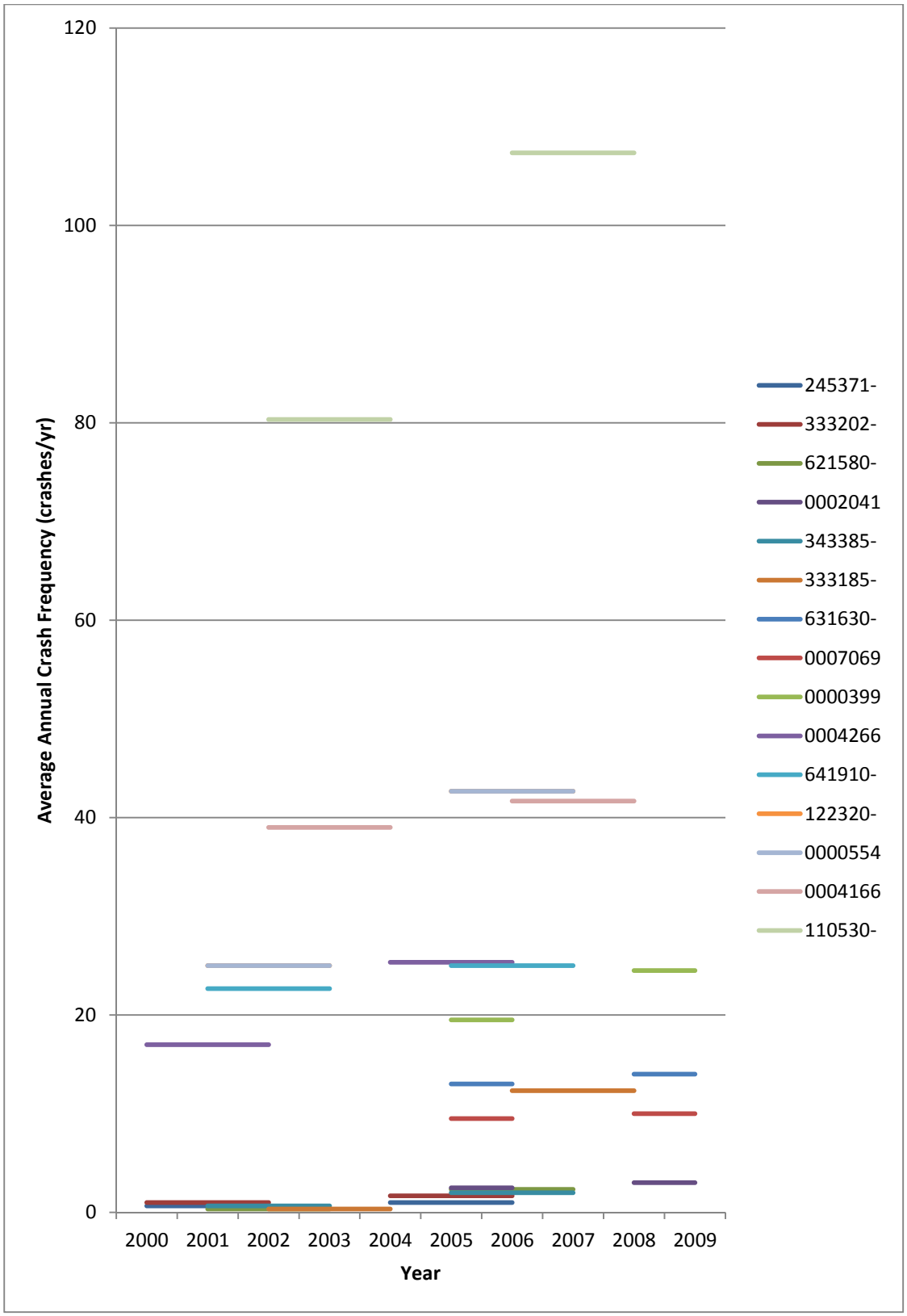

Figure 19: Projects with Increase in Average Annual Crashes Containing Vertical Alignment Design Exception

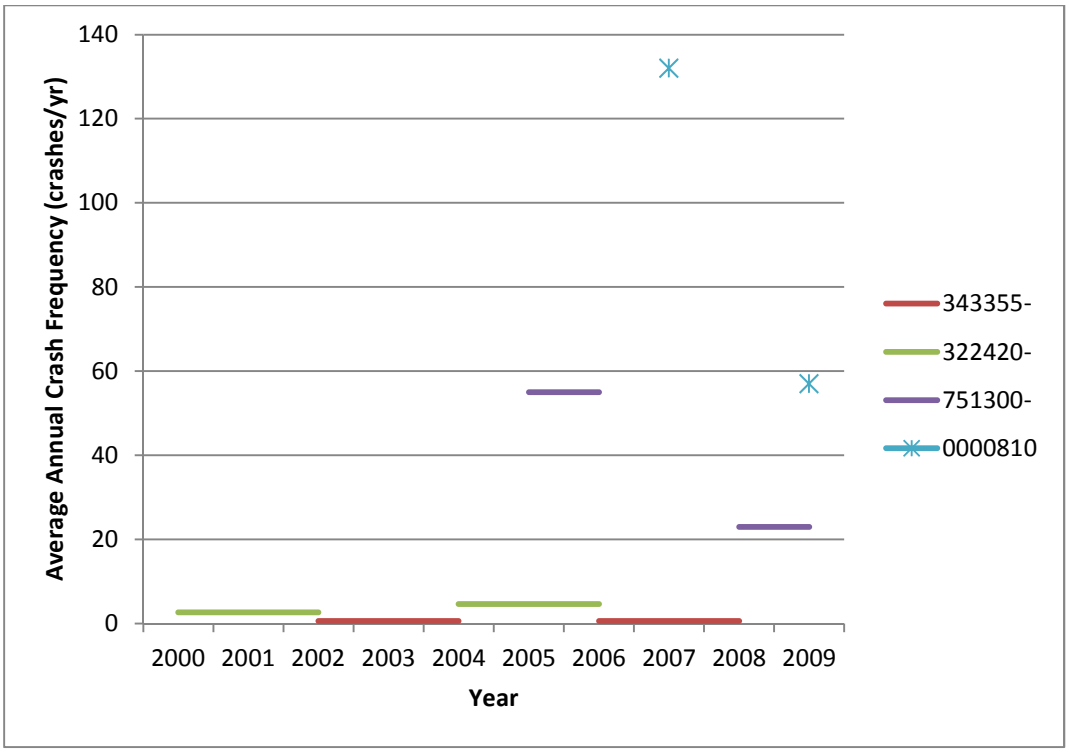

Figure 20: Projects with Average Annual Crashes Containing Grade Design Exception

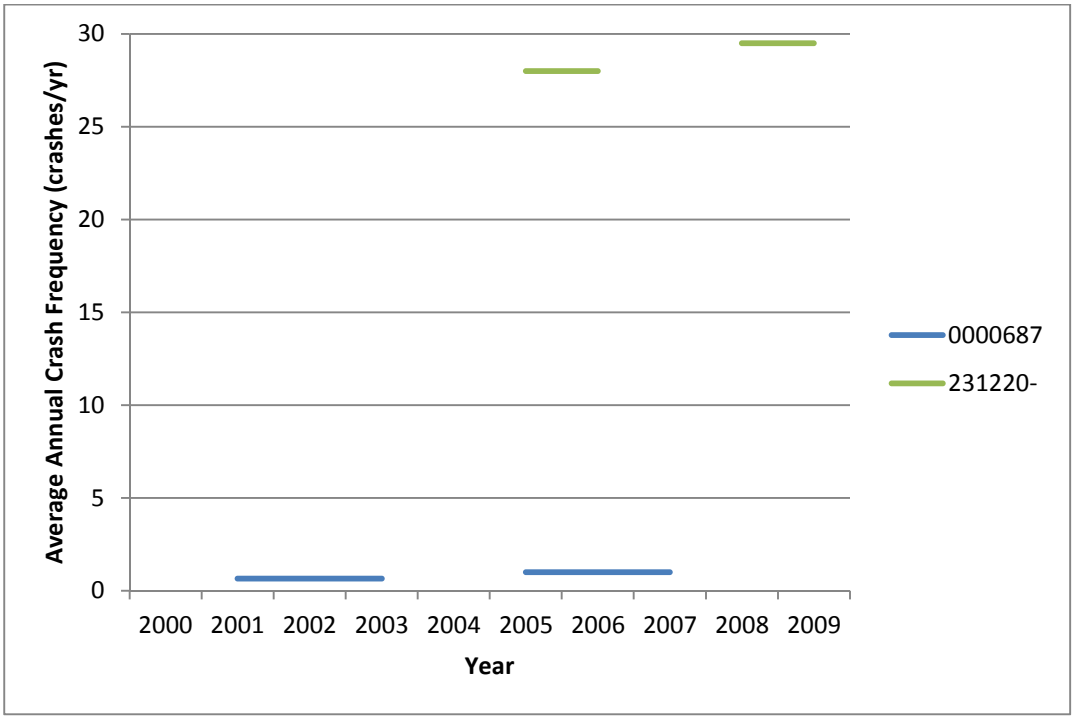

Figure 21: Projects with Average Annual Crashes Containing Superelevation Design Exception

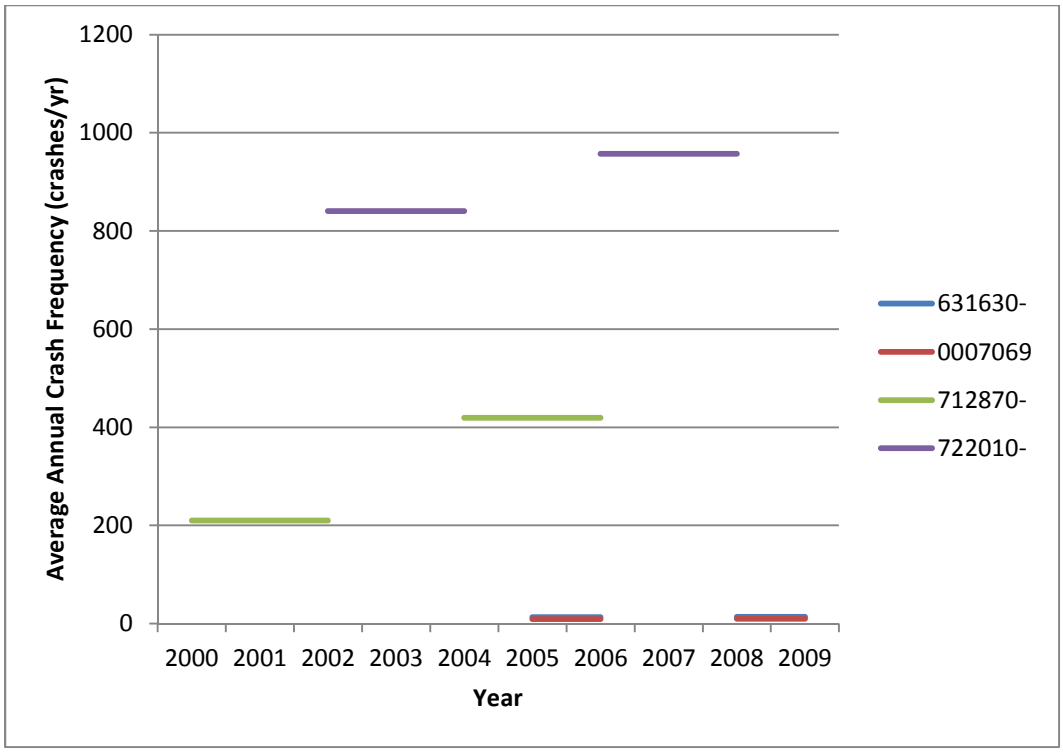

Figure 22: Projects with Average Annual Crashes Containing Stopping Sight Distance Design Exception

Similar to the total crash analysis, the sample size for the before and after average results by design exception types excluded projects with less than 10 and greater than 3650 crashes from 2000 to 2009. Among shoulder width design exceptions, 16 out of 23 projects saw reduced number of 3-year average crashes. In horizontal alignment / intersection skew type, the average results decreased for 14 out of 17 projects. However, in vertical alignment design exception category the after average crash frequencies were lower for only 13 out of 29 projects. There was no change in before and after average results for one project, and in 15 others the crash frequencies actually increased. Clearly, in the current analysis there is a mix of projects with increasing and decreasing numbers of crashes, warranting further detailed analysis into the potential impact of design

exceptions. The individual before and after average values are summarized in Tables 14 in Appendix C.

4.3.2 Crash Severity

Figure 23 below shows the proportion of crash records according to their severity types. A total of 81,608 crashes were observed, and 73.5% of them were PDO crashes. While 26.1% of all accidents involved non-fatal injuries, and 0.4% were reported to be fatal. The 3-year before and after average crash results for the three severity types are plotted in Figures 24 – 33 below. Again, projects with less than 10 and greater than 3650 crashes from 2000 to 2009 were excluded.

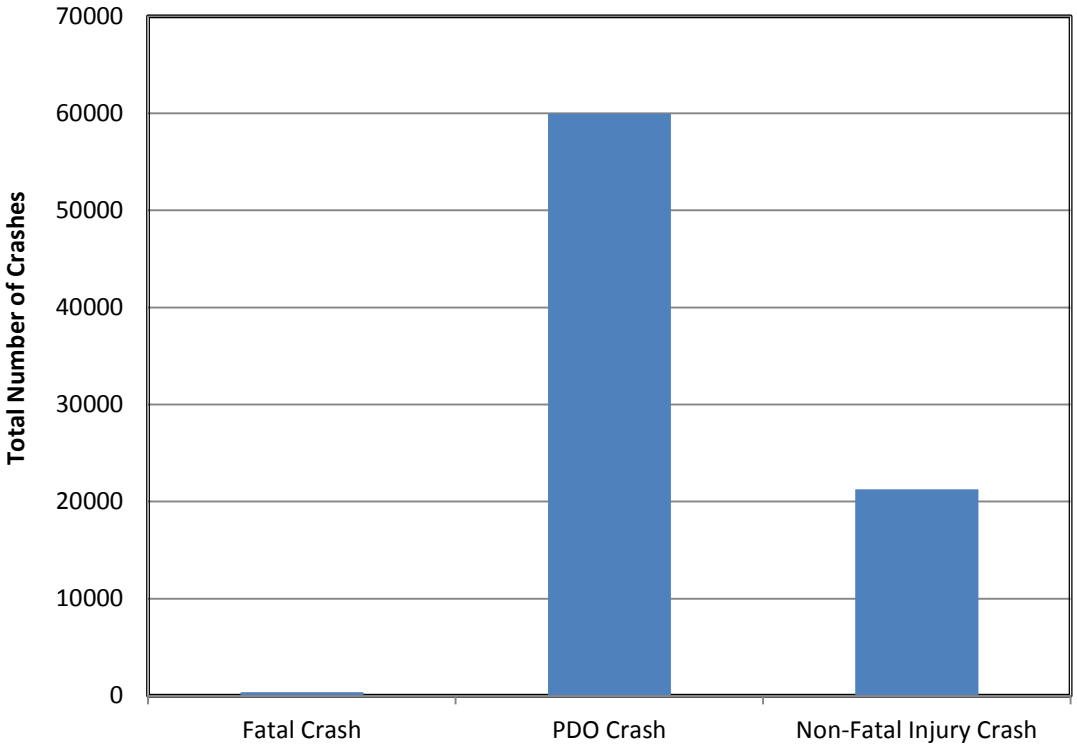

Figure 23: Total Crash Frequencies by Severity Type

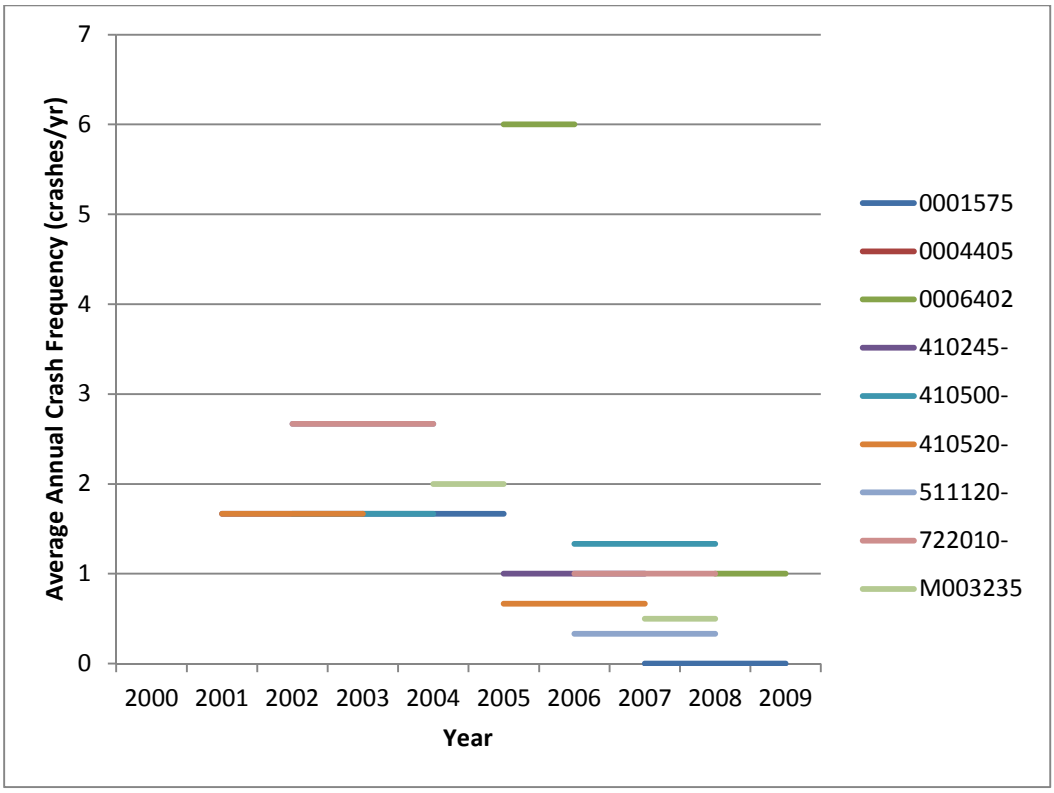

Figure 24: Projects with Decrease in Average Annual Fatal Crashes

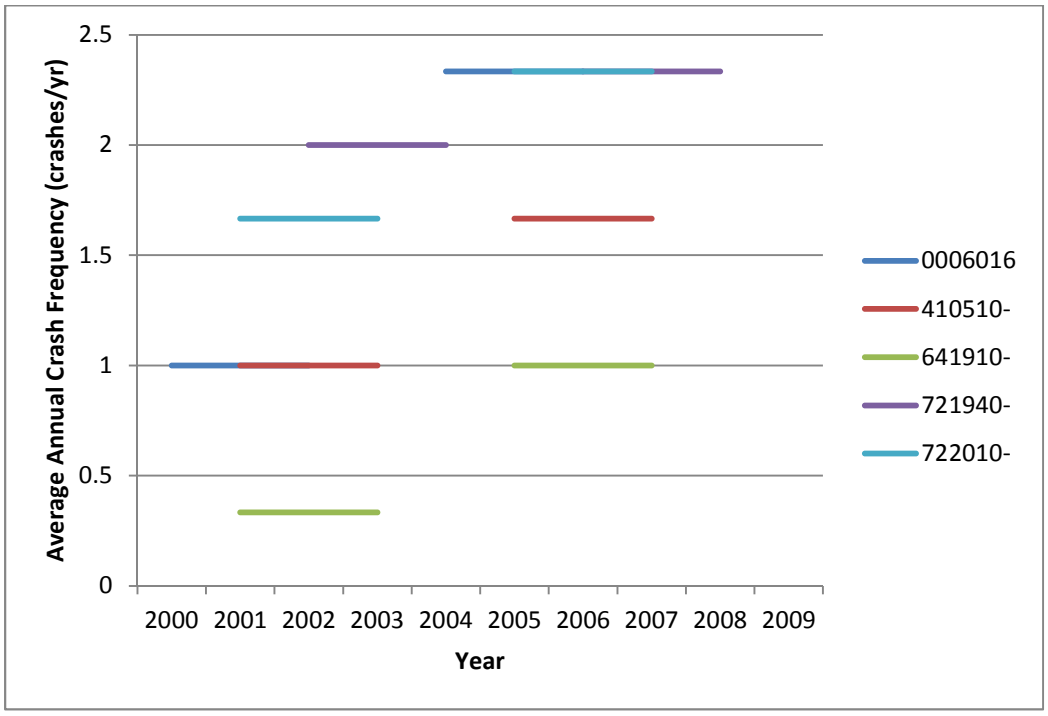

Figure 25: Projects with Increase in Average Annual Fatal Crashes

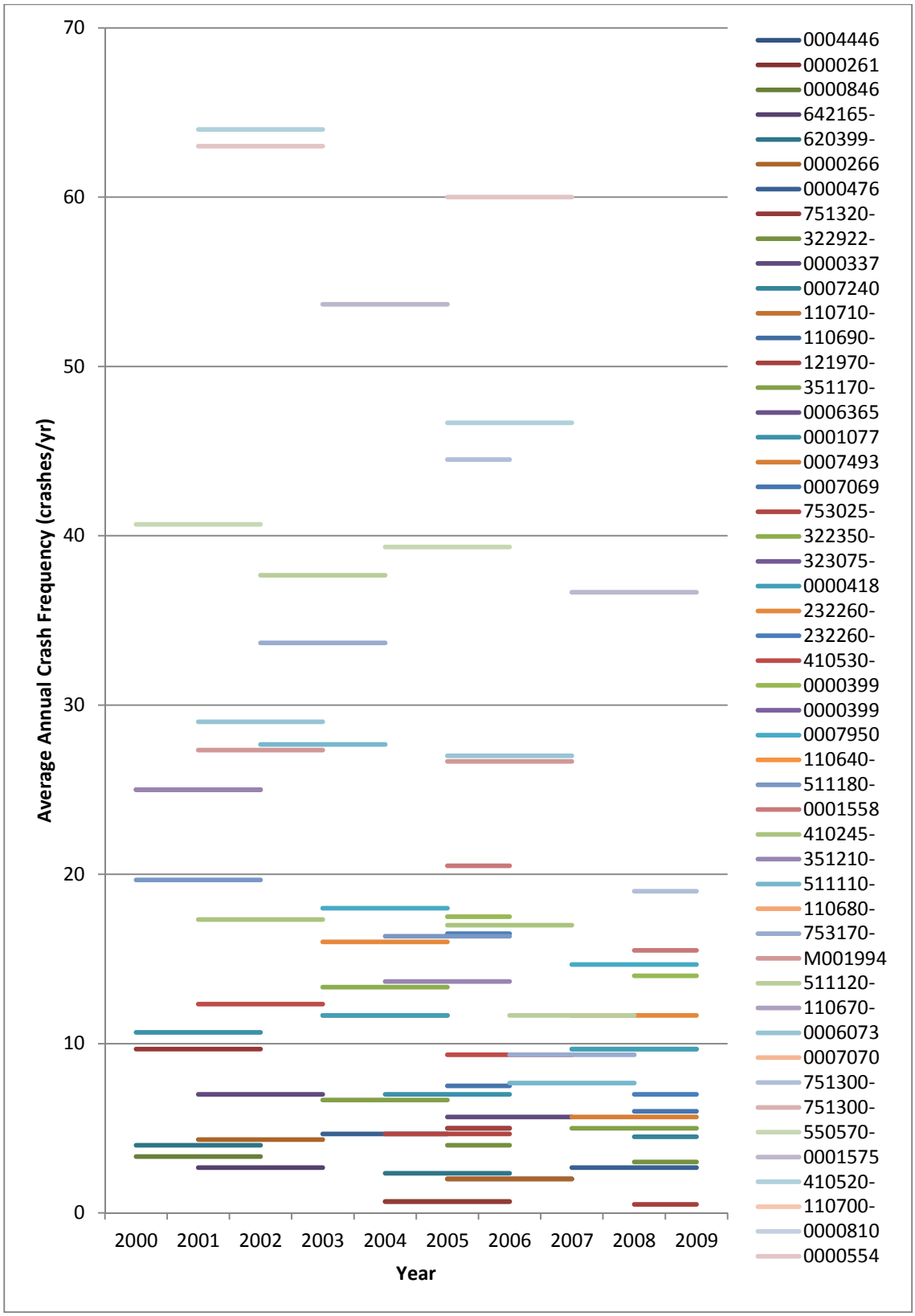

Figure 26: Projects with Decrease in Average Annual PDO Crashes (0-65 crashes/yr)

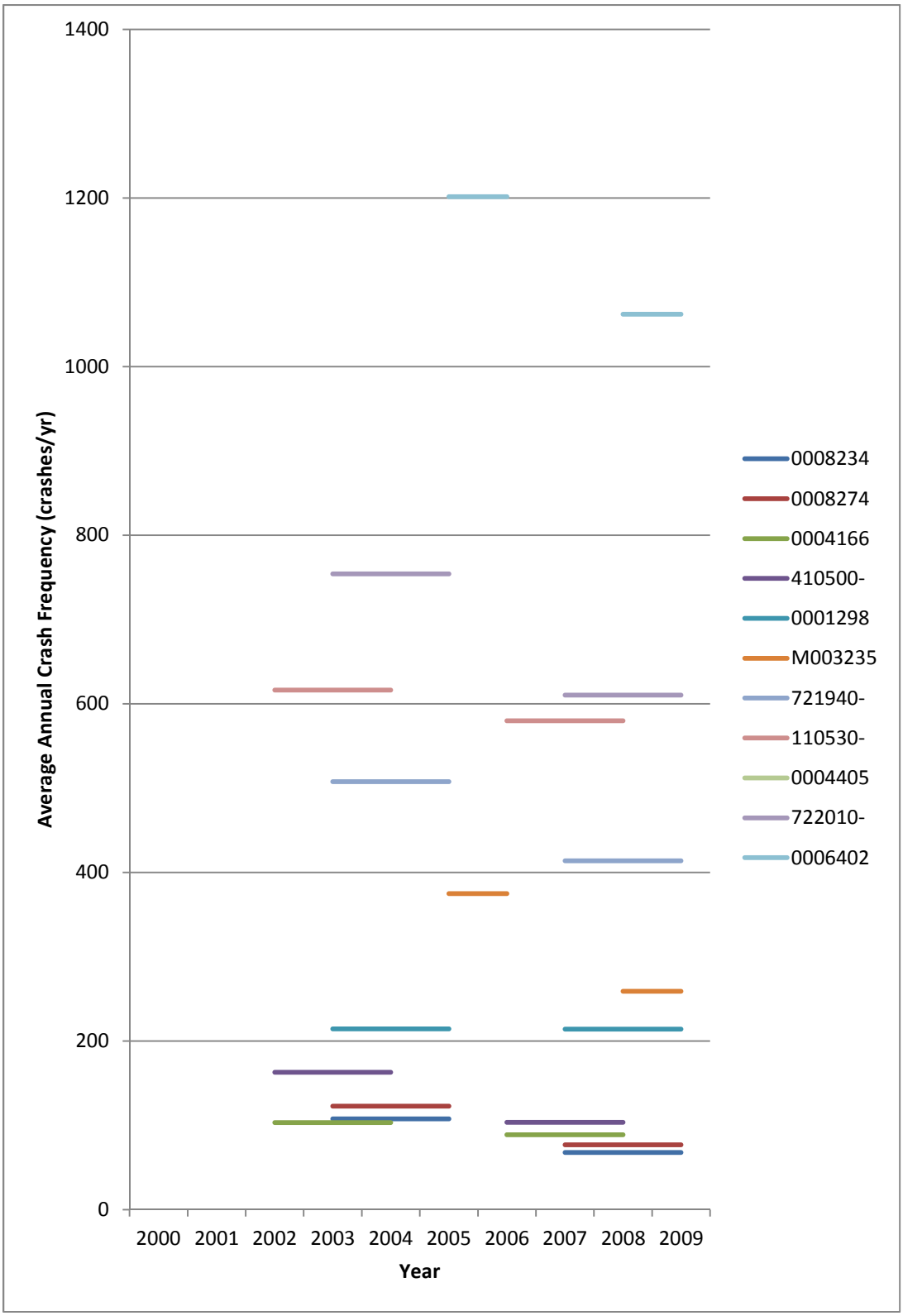

Figure 27: Projects with Decrease in Average Annual PDO Crashes (65-1210 crashes/yr)

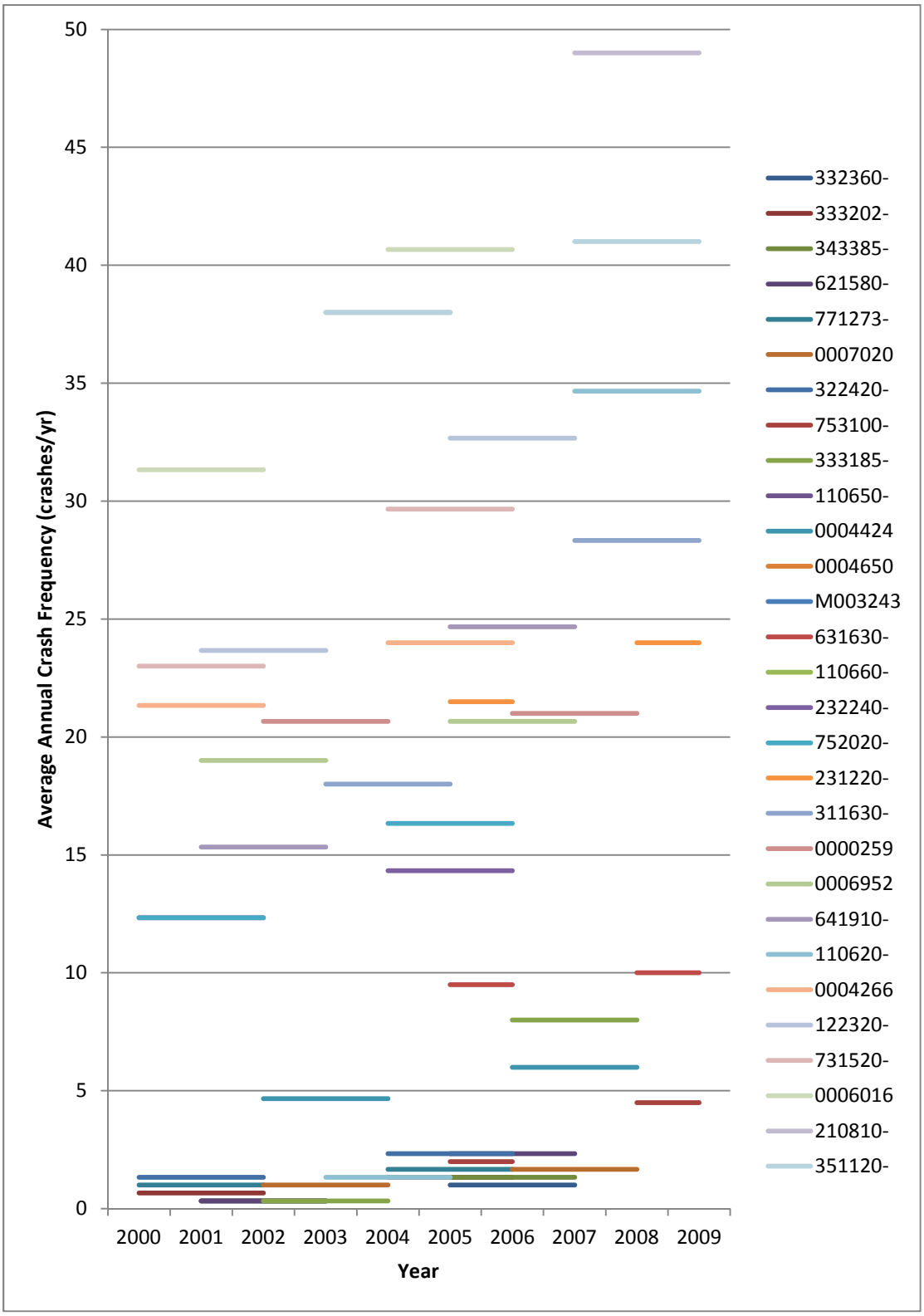

Figure 28: Projects with Increase in Average Annual PDO Crashes (0-50 crashes/yr)

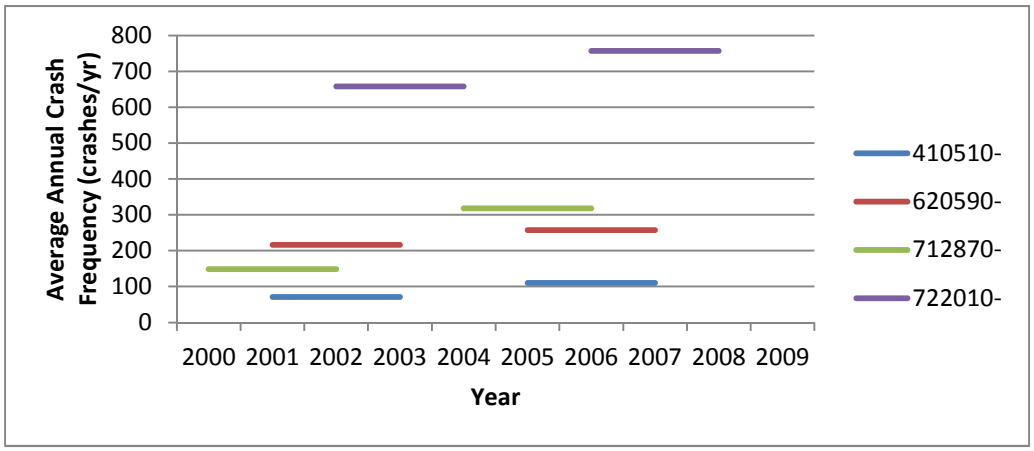

Figure 29: Projects with Increase in Average Annual PDO Crashes (70-800 crashes/yr)

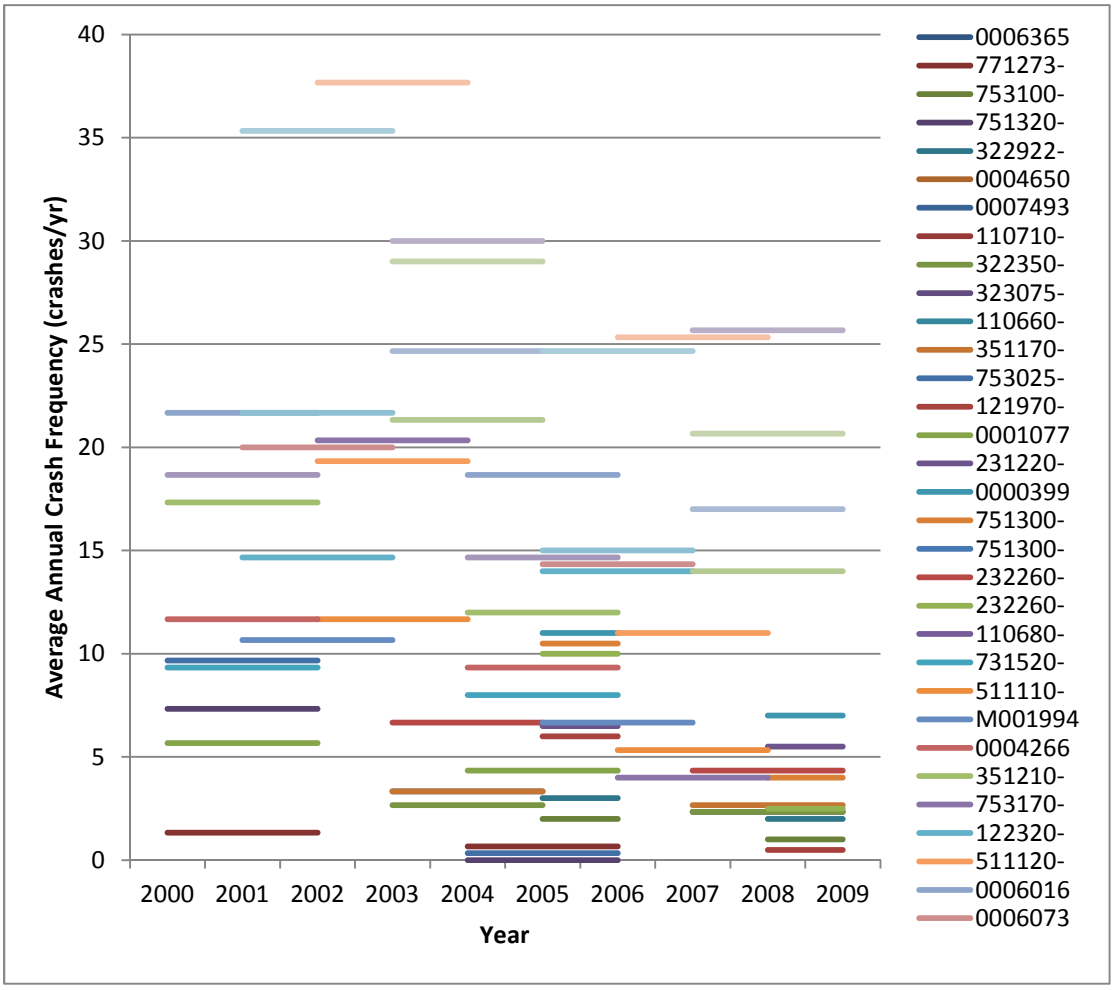

Figure 30: Projects with Decrease in Average Annual Non-Fatal Injury Crashes (0-40 crashes/yr)

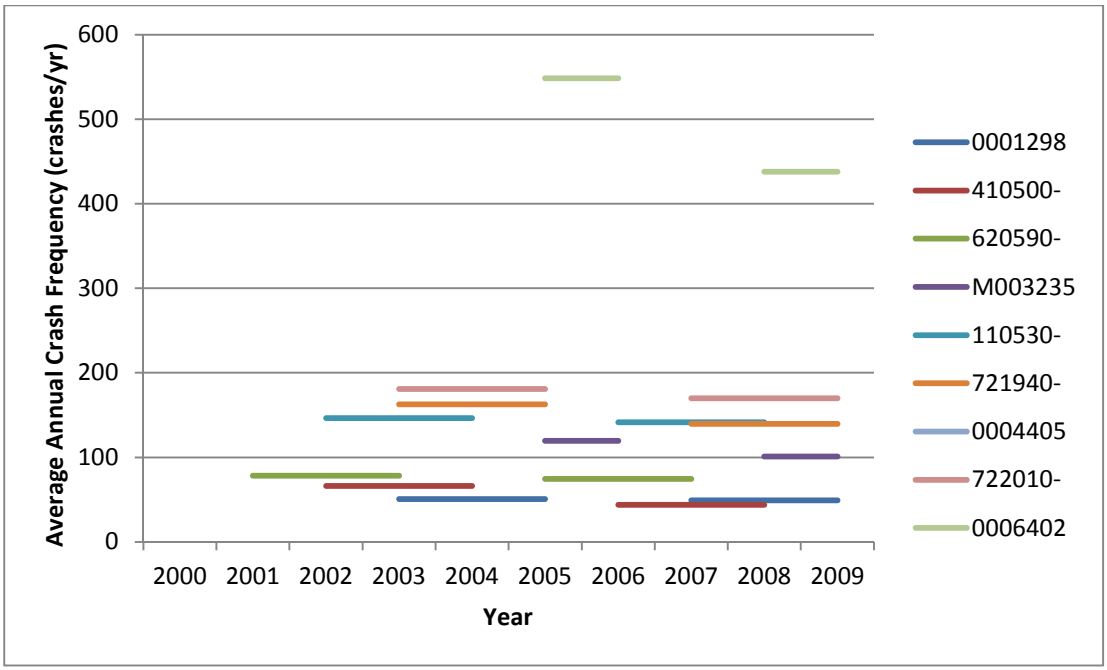

Figure 31: Projects with Decrease in Average Annual Non-Fatal Injury Crashes (40-600 crashes/yr)

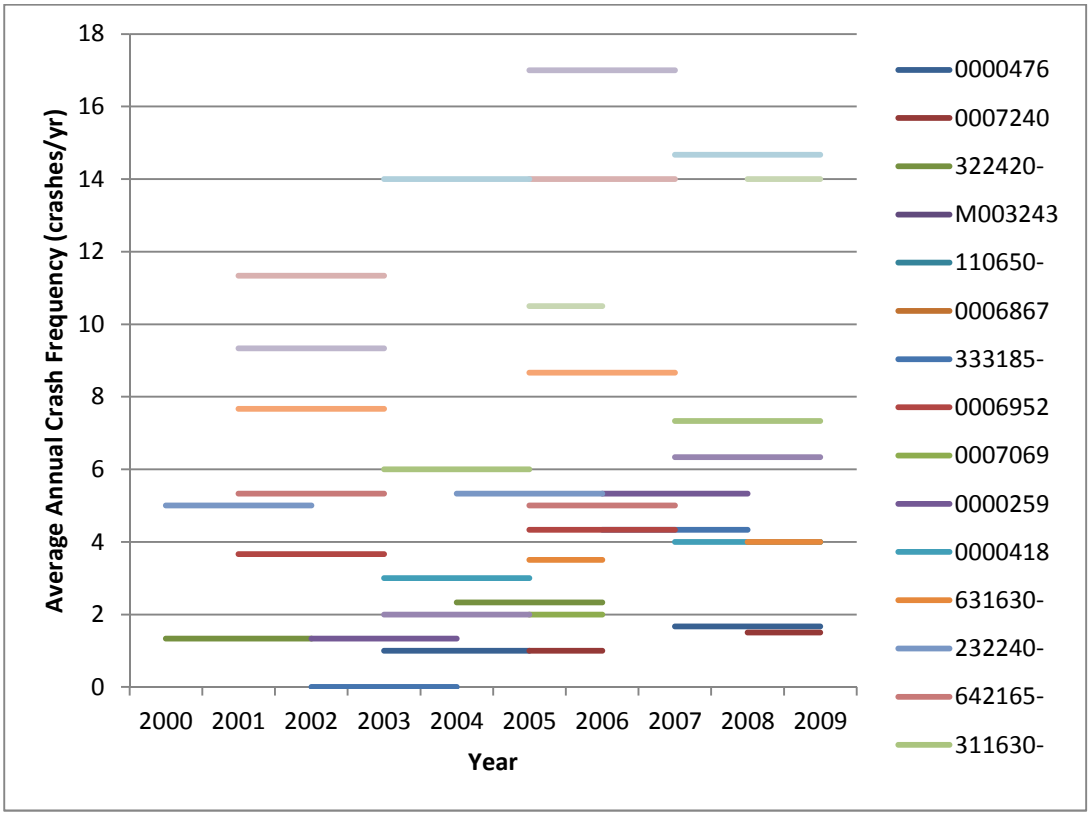

Figure 32: Projects with Increase in Average Annual Non-Fatal Injury Crashes (0-20 crashes/yr)

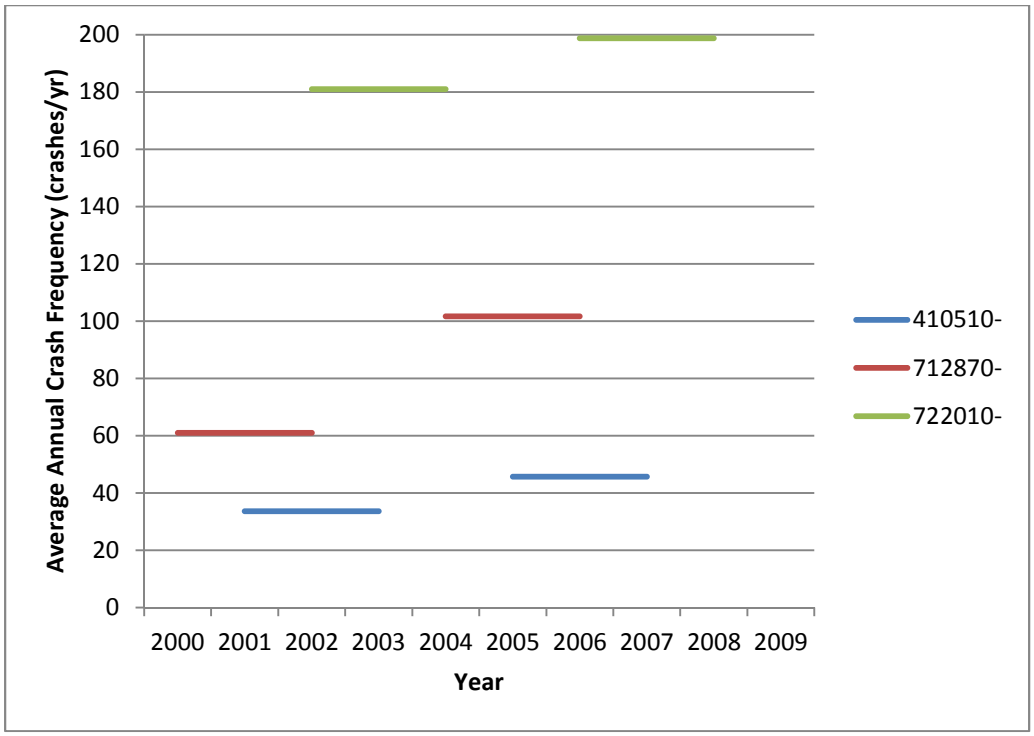

Figure 33: Projects with Increase in Average Annual Non-Fatal Injury Crashes (20-200 crashes/yr)

Fatal crashes were rare in the sample data, with 16 projects having at least 10 fatal crashes in the 10-year period. The average crash frequencies were reduced in 9 out of 16 projects, while they remained the same in 2 and increased in 5. For PDO crashes the average results after design exception approval decreased in 61 out of 95 projects. Among non-fatal injury crashes, 51 out of 84 projects saw decrease in the average crash results. An additional future effort should also seek to compare changes in before and after crashes by severity types on projects not containing a design exception to aid in developing a baseline expectation, acting as a control group regarding incident changes related to projects. The individual before and after average values are summarized in Tables 15 – 17 in Appendix D.

4.3.3 Crash Type

Figure 34 below classifies the accident results by their crash types. A total of 32,834 crashes were observed, which was significantly less than the sample sizes for design exception and severity type analyses. This was because in the previous two analyses, a crash could be counted in multiple categories. The most common crash type was rear end which made up 40.2% of all accidents. The percentages of crashes not involving motor vehicles, angle crashes, and sideswipe crashes involving vehicles traveling in same direction were 21.7%, 19.5%, and 17.4%, respectively. Total crash results for head on and sideswipe-opposite direction crashes were extremely low, so the before and after average analysis was not conducted for these two crash types. The 3-year before and after average crash results for all crash types except these two are plotted in Figures 35 – 50 below.

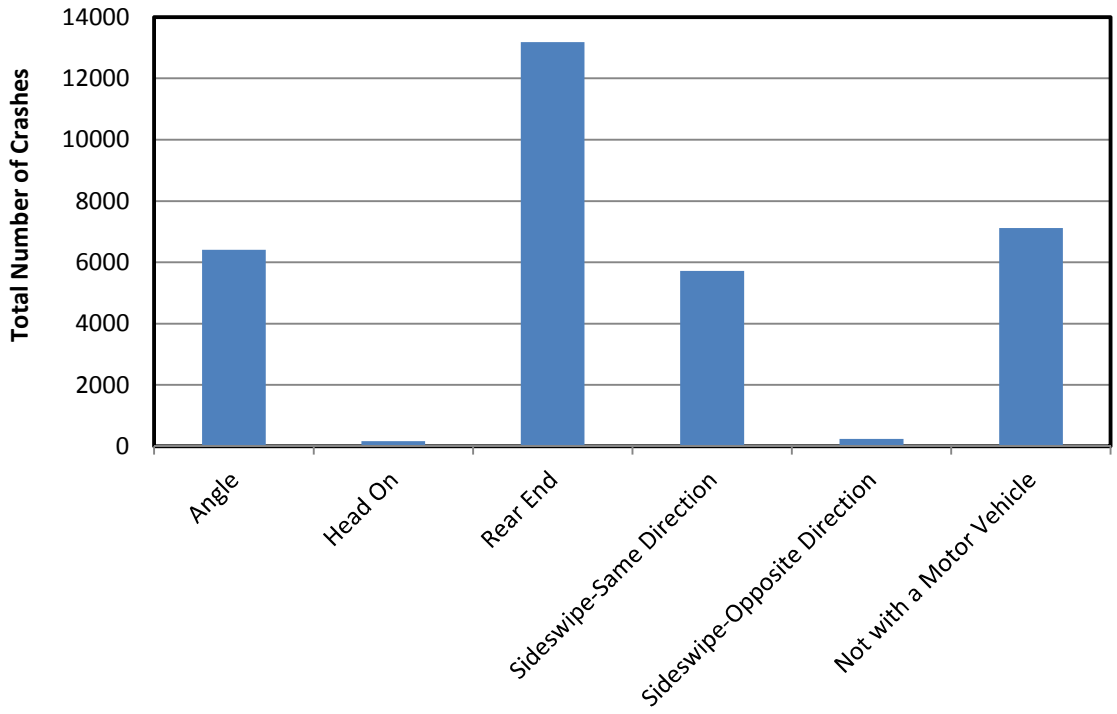

Figure 34: Total Crash Frequencies by Crash Type

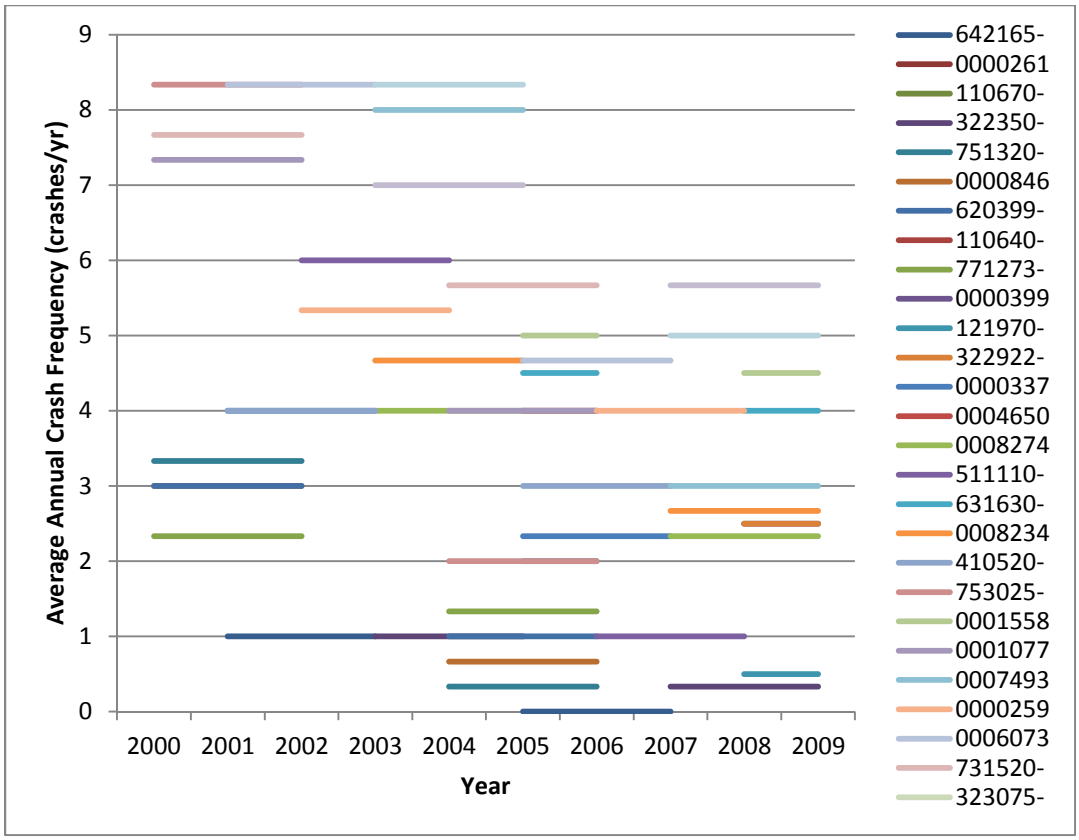

Figure 35: Projects with Decrease in Average Annual Angle Crashes (0-9 crashes/yr)

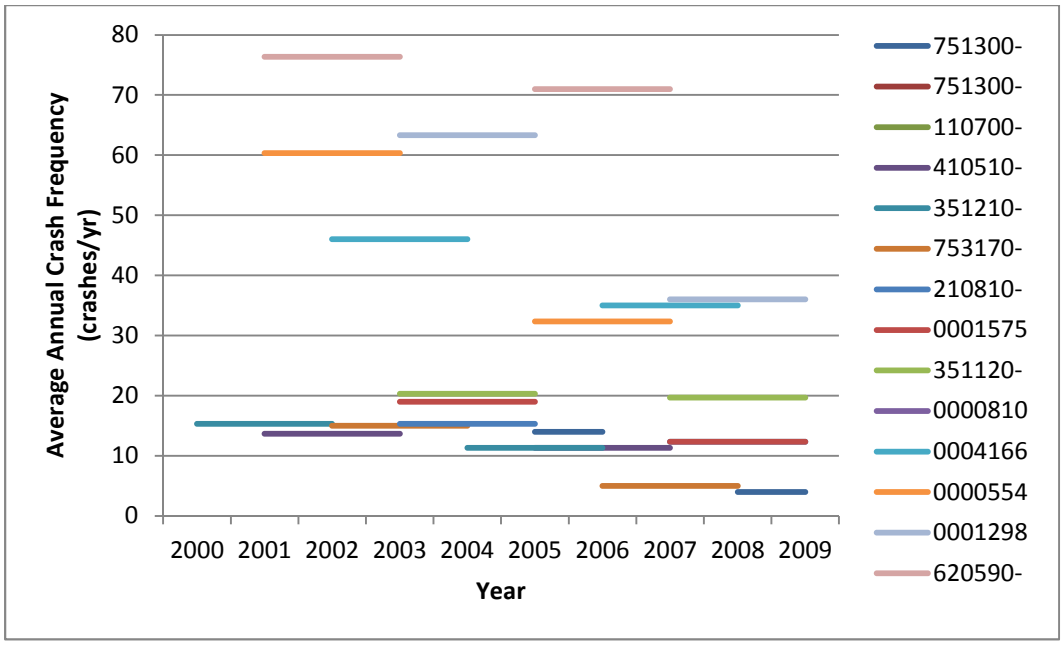

Figure 36: Projects with Decrease in Average Annual Angle Crashes (0-80 crashes/yr)

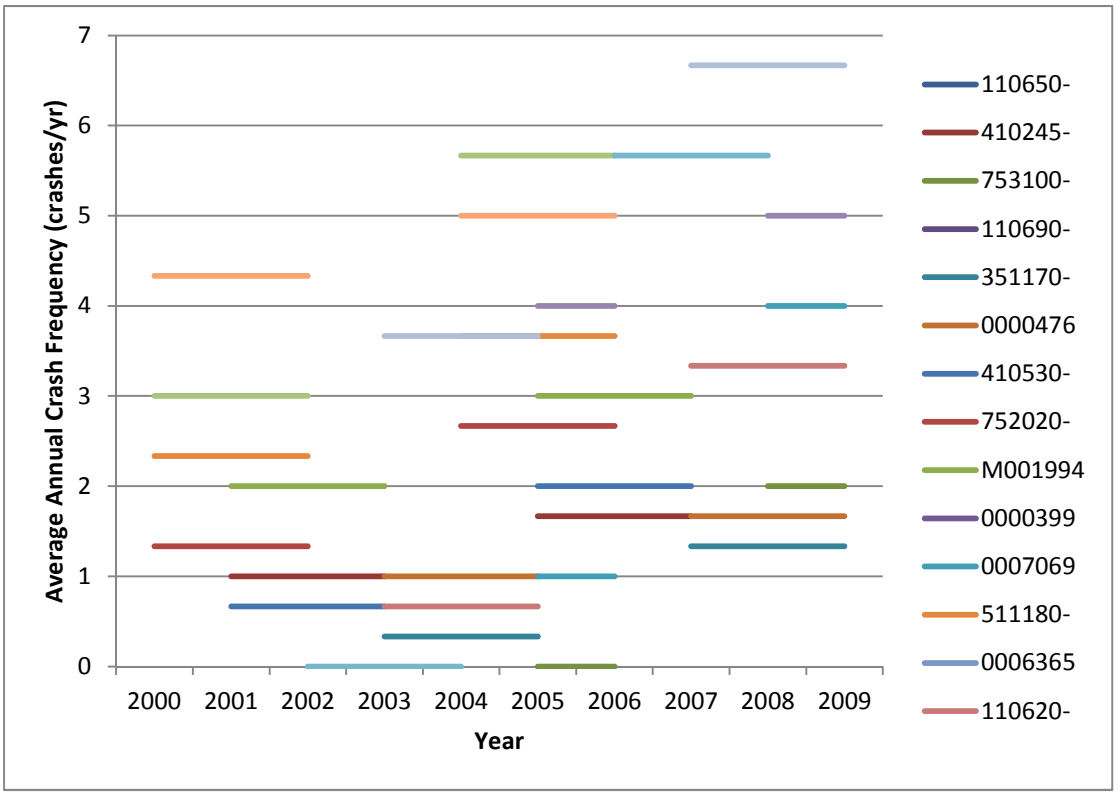

Figure 37: Projects with Increase in Average Annual Angle Crashes (0-7 crashes/yr)

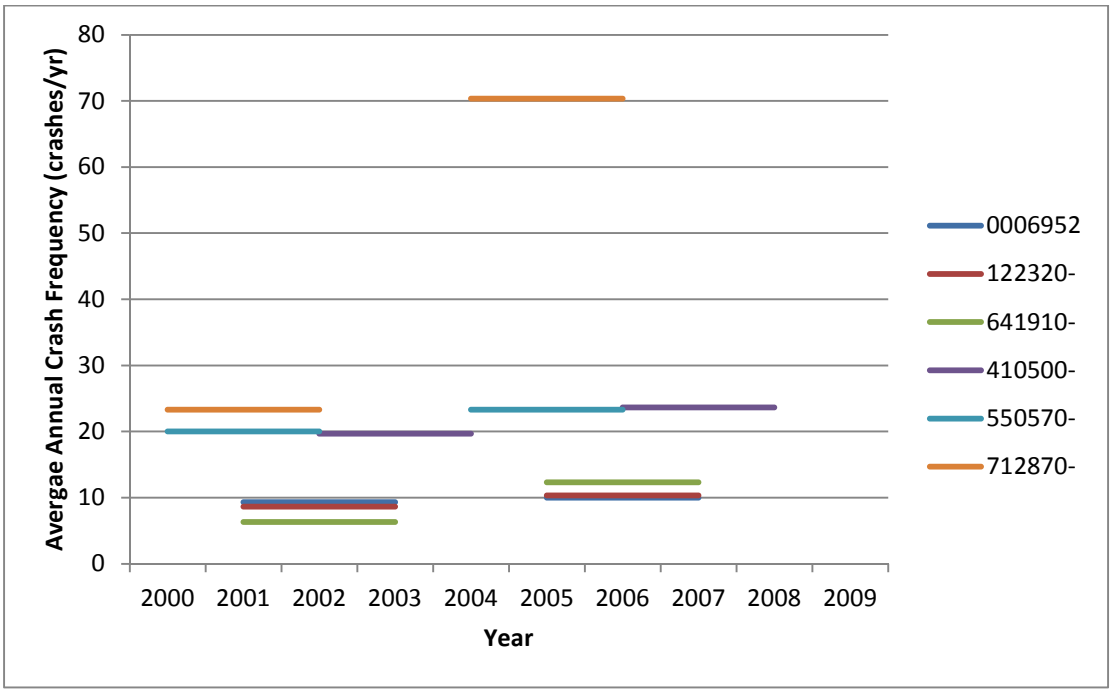

Figure 38: Projects with Increase in Average Annual Angle Crashes (0-80 crashes/yr)

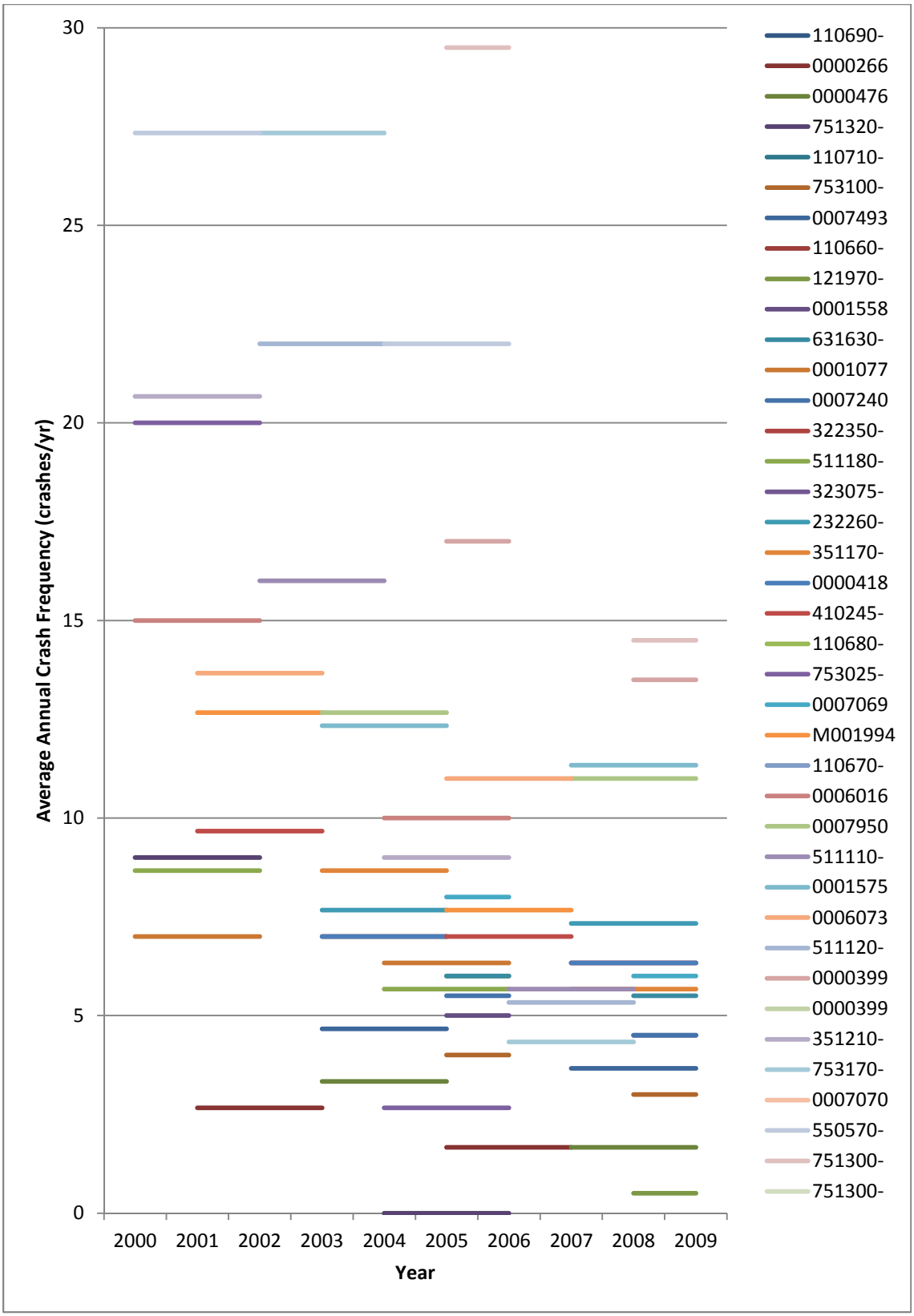

Figure 39: Projects with Decrease in Average Annual Rear End Crashes (0-30 crashes/yr)

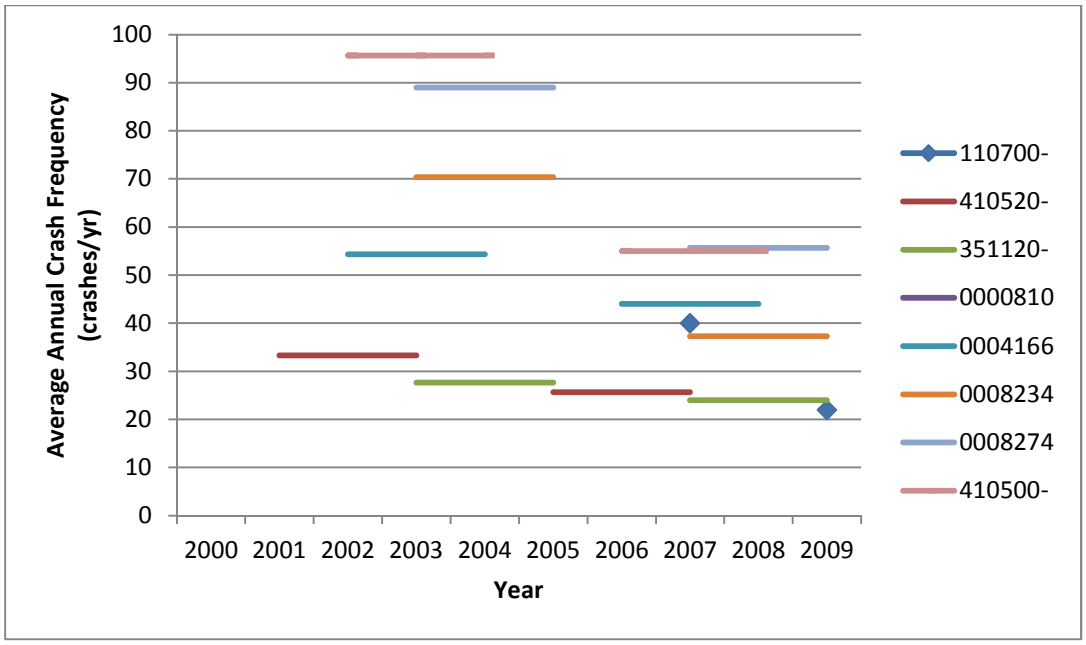

Figure 40: Projects with Decrease in Average Annual Rear End Crashes (20-100 crashes/yr)

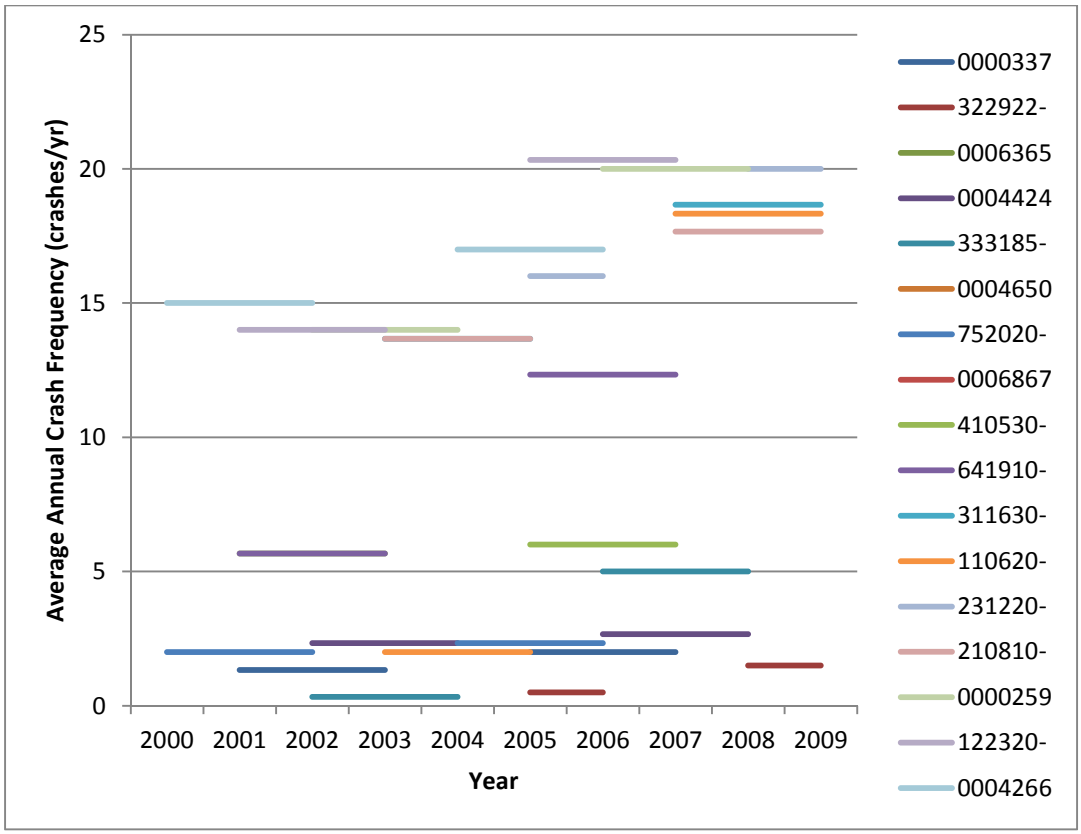

Figure 41: Projects with Increase in Average Annual Rear End Crashes (0-25 crashes/yr)

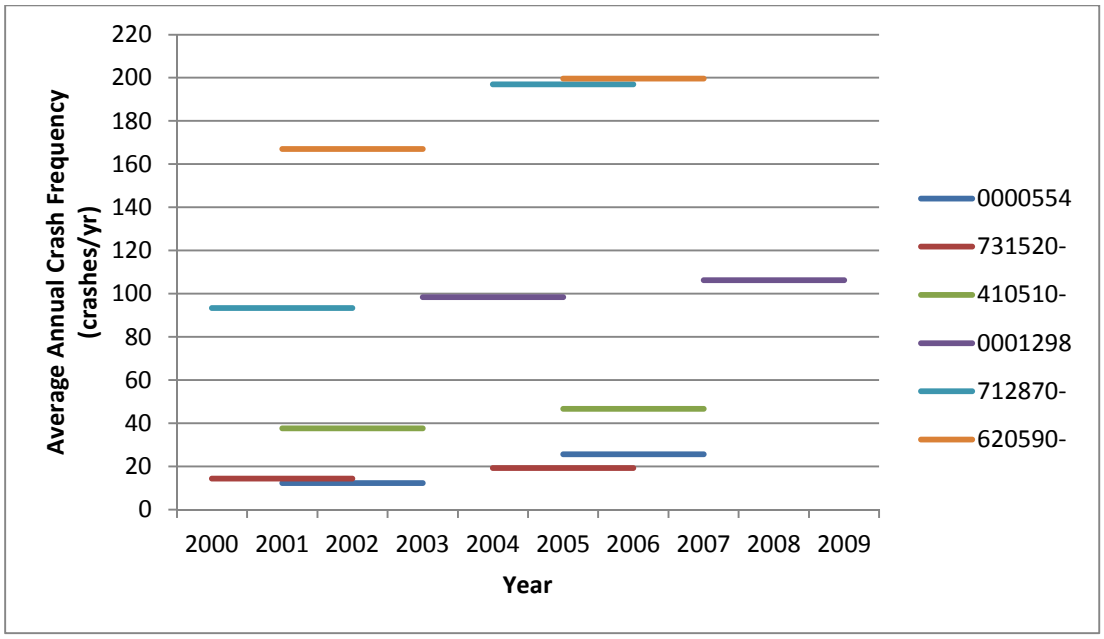

Figure 42: Projects with Increase in Average Annual Rear End Crashes (10-200 crashes/yr)

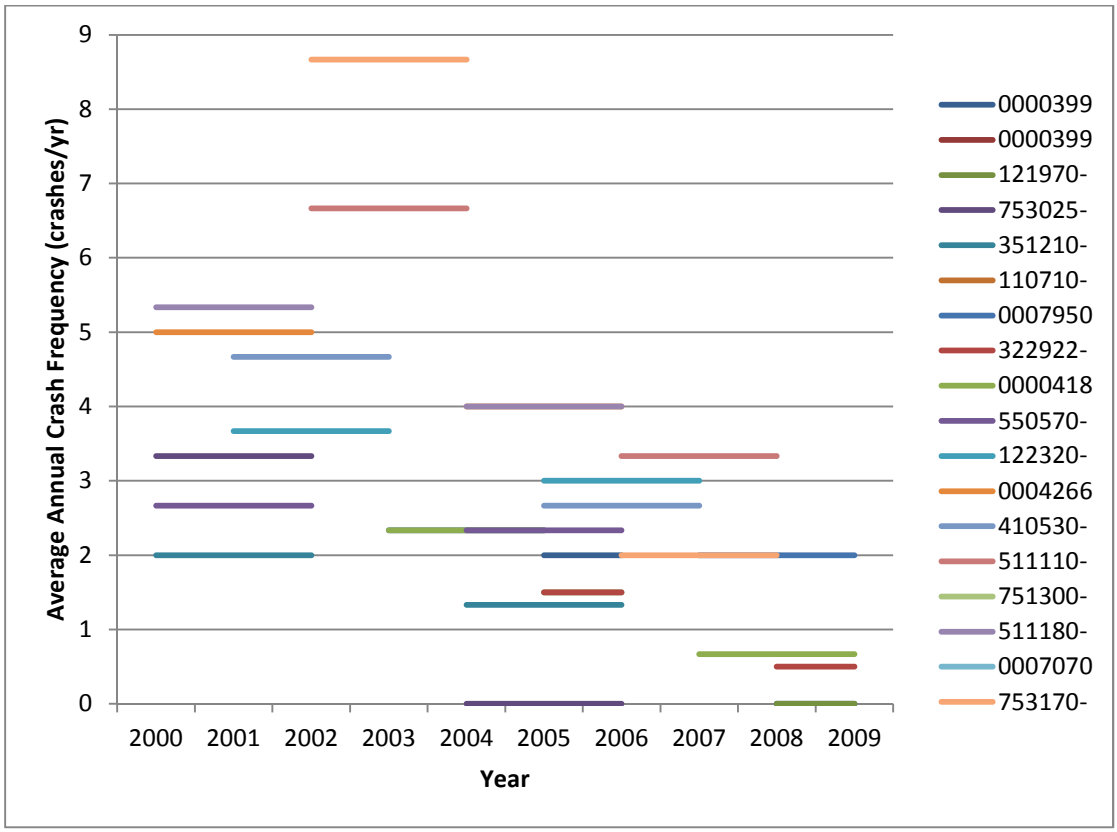

Figure 43: Projects with Decrease in Average Annual Sideswipe- Same Direction Crashes (0-9 crashes/yr)

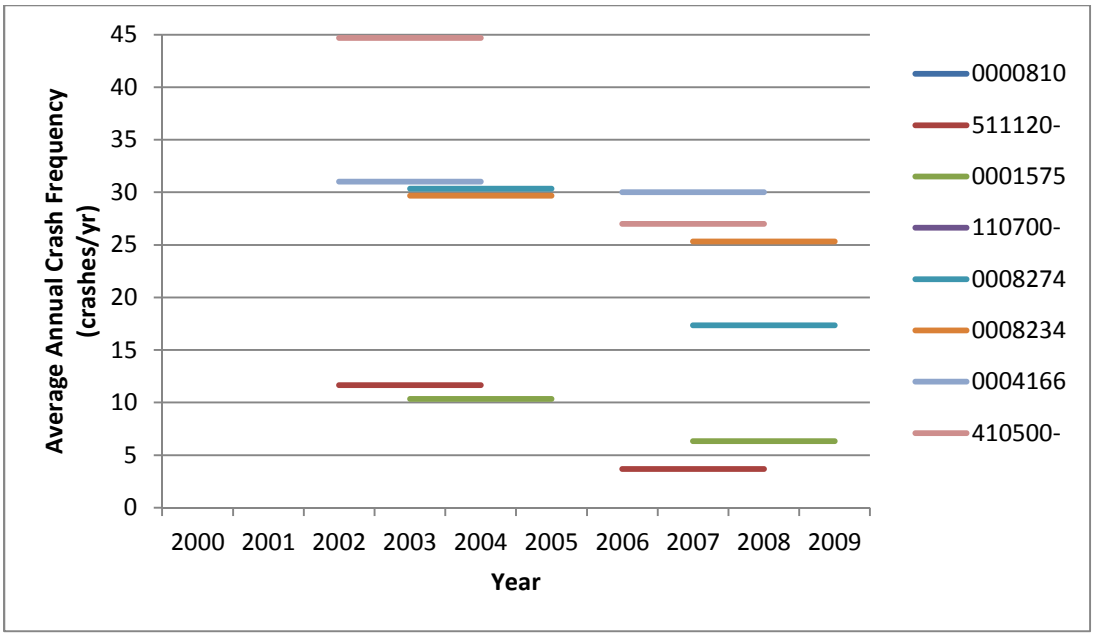

Figure 44: Projects with Decrease in Average Annual Sideswipe- Same Direction Crashes (0-45 crashes/yr)

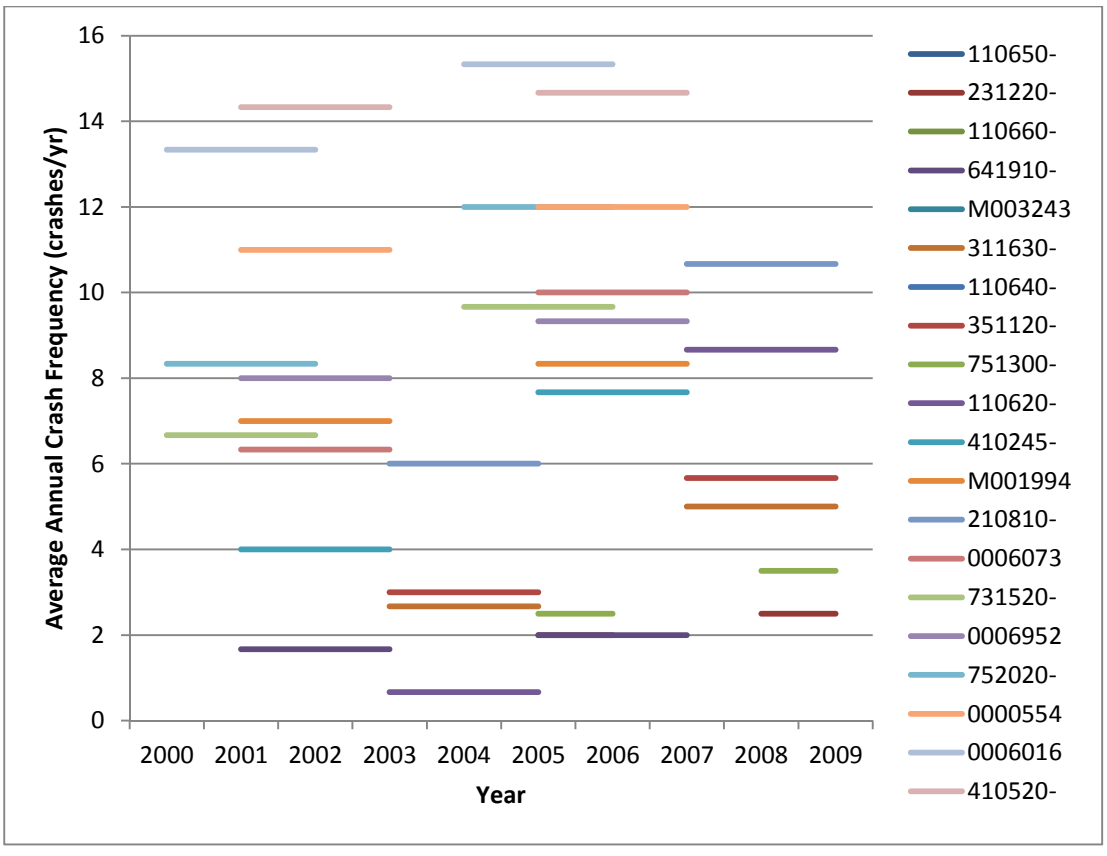

Figure 45: Projects with Increase in Average Annual Sideswipe- Same Direction (0-16 crashes/yr)

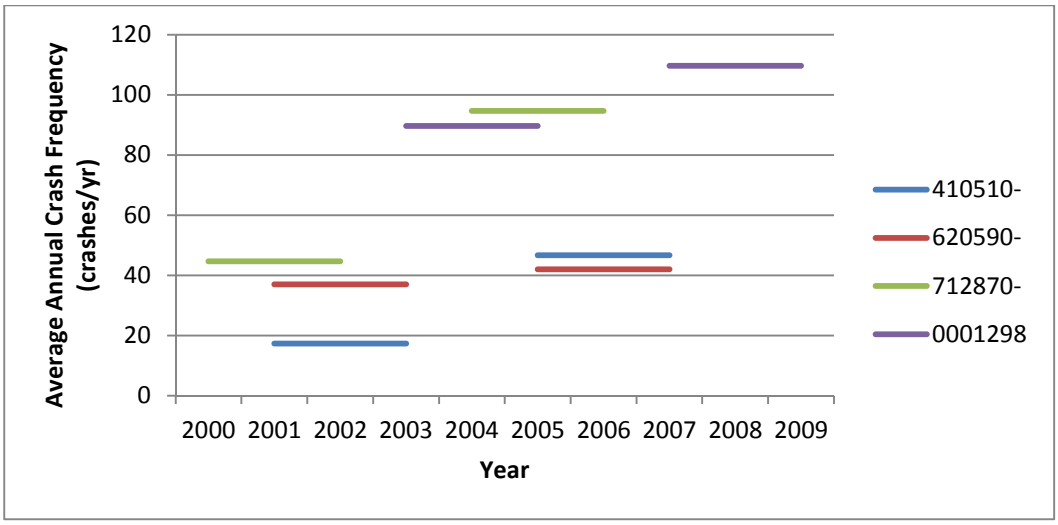

Figure 46: Projects with Increase in Average Annual Sideswipe-Same Direction Crashes (16-120 crashes/yr)

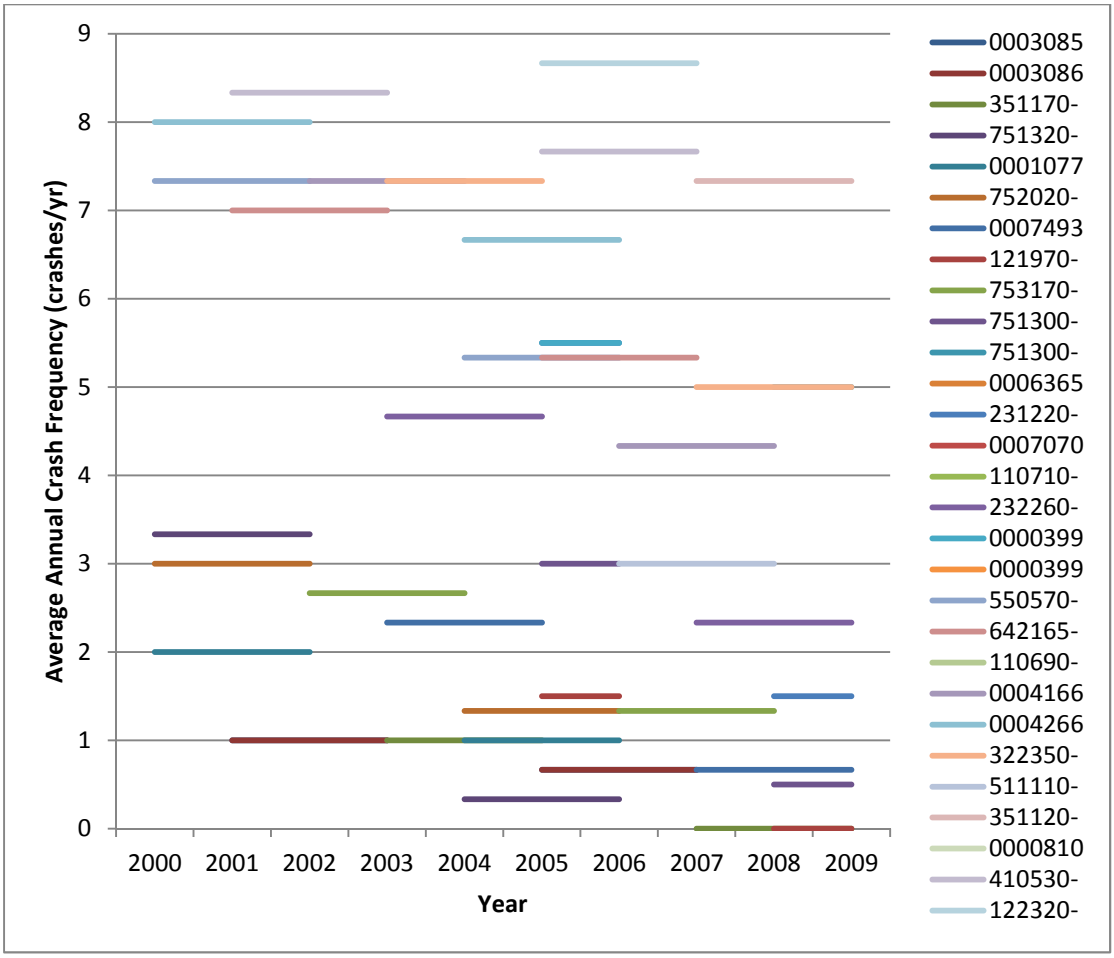

Figure 47: Projects with Decrease in Average Annual Crashes Not Involving Motor Vehicle (0-9 crashes/yr)

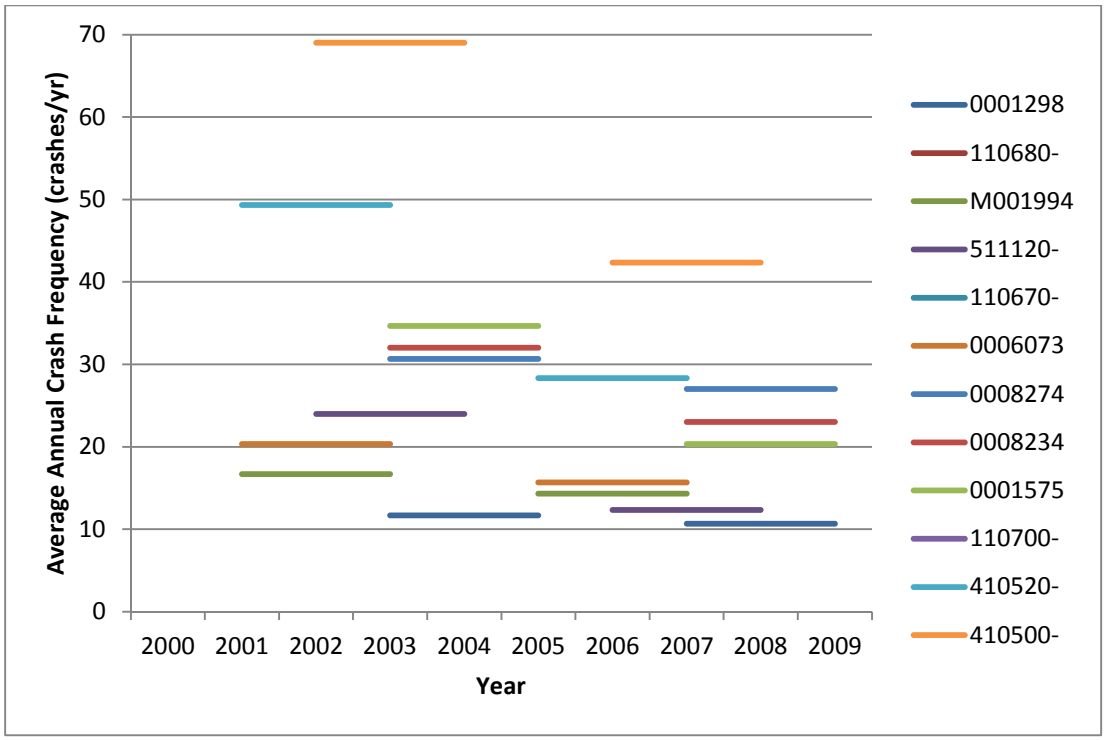

Figure 48: Projects with Decrease in Average Annual Crashes Not Involving Motor Vehicle (10-70 crashes/yr)

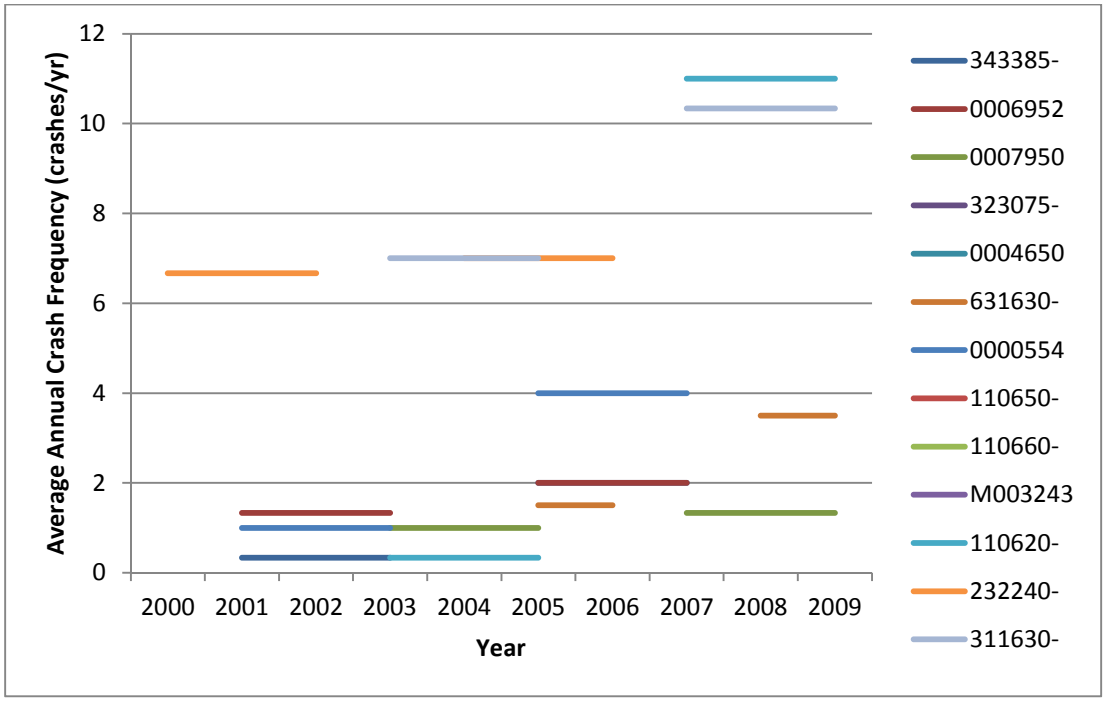

Figure 49: Projects with Increase in Average Annual Crashes Not Involving Motor Vehicle (0-12 crashes/yr)

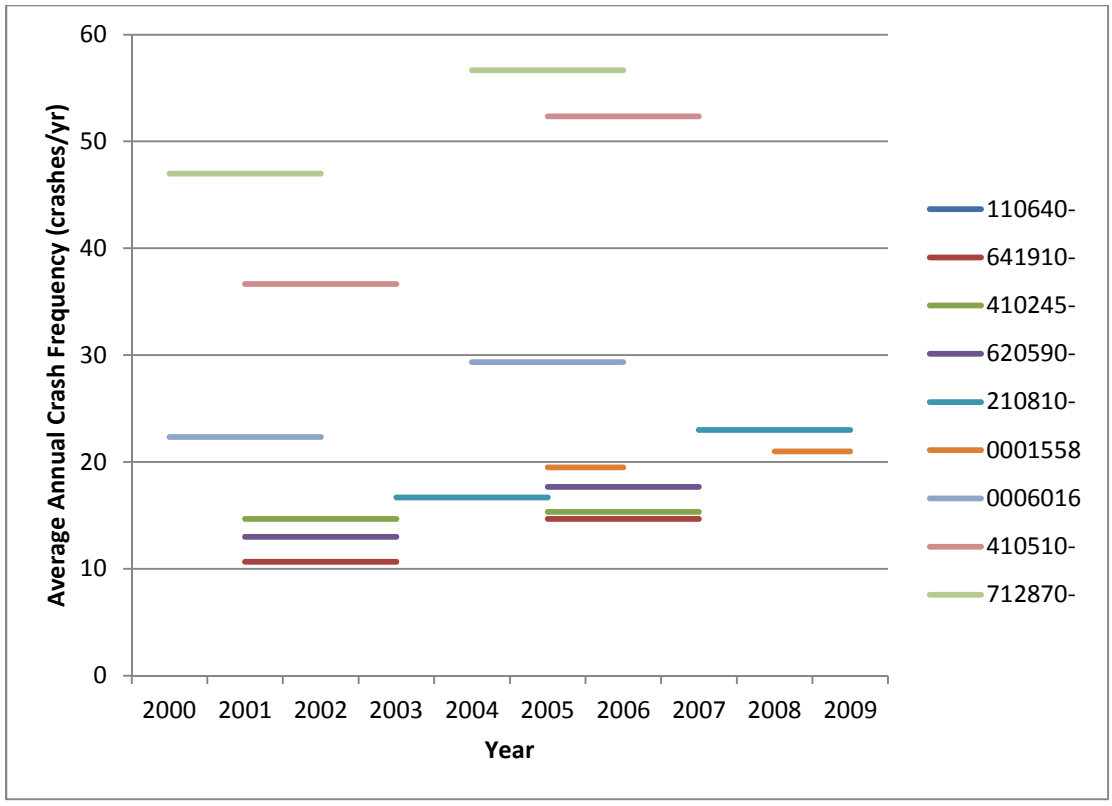

Figure 50: Projects with Increase in Average Annual Crashes Not Involving Motor Vehicle (10-60 crashes/yr)

The number of project locations considered for each crash type was different because not every site observed all six types. For example, at project 0000259 142 out of 220 reported crashes were rear end, and no head on and sideswipe-opposite direction crashes were reported. A total of 74 projects contained at least 10 angle crashes, of which the average crash results decreased in 43 projects. The number of projects with at least 10 rear end crashes was 74, of which 47 saw decrease in average crash frequency. In sideswipe-same direction category, the average annual crash frequency after design exception approval was lower in 26 out of 54 observed projects. From CARE-generated reports, accident records that indicated either “no second vehicle” or “non-contact vehicle” in maneuver and point of impact fields were classified as not involving a motor

vehicle. The number of projects with reduced after average results was 41 out of 68 projects. The individual before and after average values by crash type are shown in Table 18 – 23 in Appendix E.

CHAPTER 5

APPLICATION OF HIGHWAY SAFETY MANUAL

In addition to the before and after average crash analysis, the next step is to use the HSM for predicting the expected crash frequencies at project locations with design exceptions. The HSM predictive method demonstrates how the expected average number of accidents in a given time period can be estimated for a site, facility, or road network based on its specific traffic control features, geometric design, and average annual daily traffic (AADT). Currently, however, the HSM can only be applied to rural two-lane roads, rural multilane highways, and urban and suburban arterials. For each of these roadway types, the manual provides crash modification factors (CMF) that estimate the expected approximate change in crash severity or frequency due to a particular treatment. For example, after a countermeasure with a CMF of 0.90 for angle crashes is applied at a project location, a 10% reduction in the number of angle crashes per year is expected. While an online CMF clearinghouse contains other CMFs developed through various scientific studies, the CMFs in the HSM are the currently accepted values [14].

A major obstacle lies in the fact that the HSM cannot be used to investigate the impact of each of the 13 design exceptions and their mitigation measures. While other facility types such as interstates, rural arterials, urban two-way roads, and multi-use trails were found in the design exceptions dataset, their relevant predictive methods are not found in the 1st HSM edition. Table 8 below shows a checklist of which 13 design exception categories are addressed in the manual for each roadway classification.

Table 8: Design Exceptions by HSM Facility Types

	Design Exception Type	Rural Two-Lane Road	Rural Multi-Lane Highway	Urban and Suburban Arterial
1	Design Speed			
2	Lane Width	Y	Y	
3	Shoulder Width	Y	Y	
4	Bridge Width			
5	Structural Capacity			
6	Horizontal Clearance/Lateral Offset			Y
7	Vertical Clearance			
8	Horizontal Alignment/Intersection Skew	Y	Y	
9	Vertical Alignment			
10	Cross Slope			
11	Grade	Y		
12	Superelevation	Y		
13	Stopping Sight Distance			

The HSM contains treatments on 6 design exception categories, of which only shoulder width and horizontal alignment / intersection skew were among the most commonly found types in the raw and sample design exceptions dataset. Vertical alignment was the most frequent design exception in Georgia, but the HSM does not focus on any mitigations regarding vertical curve design. CMFs for other important design exceptions such as design speed, vertical clearance, and stopping sight distance are not mentioned in the manual. Certain CMF descriptions may also be difficult to use or interpret. For example, two CMFs on horizontal clearance/lateral offset design exception are found in the HSM: roadside design for rural two-lane roadways and roadside fixed objects for urban and suburban arterials. The input parameter for roadside design CMF equation is roadside hazard rating, which was developed in a Transportation Research Board (TRB)

paper by Zegeer et al. [14]. On the contrary, the CMF equation for roadside fixed objects considers the offset distance to fixed objects and as well as factors depending on the offset distance and road type. If a roadway project was flagged with potential problems concerning horizontal clearance / lateral offset and the offset distance data were collected, a direct application of the HSM would only be possible if the roadway was considered an urban or suburban arterial.

Currently, the HSM predictive method incorporates the safety implications of many but not all traffic control features and geometric designs. While it considers the impact of a facility's physical features, it fails to address the effects of other behavioral and environmental factors [14]. For example, the variability in attributes such as AADT, weather conditions, and driver population across different jurisdictions is not fully identified. Using the same equation to estimate the crash frequency for a wide AADT range, various weather conditions, and driver population across different jurisdictions decreases the confidence in the calculation. In this way, the HSM predictive method does not consider local parameters, potentially leading to the need to conduct local calibration of the equations particularly for CMFs of more frequently utilized design exceptions. These main issues will dictate the ability to obtain sufficient data and whether the HSM analysis can be reliably implemented at project sites with design exceptions.

While the type of before and after study performed in this research can evaluate the impact of mitigation measures in lowering crashes, it can also contain design flaws and limitations. First, there may have been the presence of regression to the mean bias which may lead to misrepresenting the true effectiveness of treatments and providing falsely estimated results [21]. Therefore, the potential for this bias will need to be taken

into consideration in the future for reliable before and after studies. If it is not overcome, then a project site in question may not be chosen when there is high random variation in crash data or ignored when there is low random variation in crash data [22]. This is where the HSM can be a useful tool, as its predictive methods and CMFs are known to have been developed by before and after studies that deal with regression to the mean bias.

The HSM can also be used to find the expected crash rates and compared to the actual values. For example, if the actual results for particular design exceptions are higher than expected, then the corresponding design exceptions not meeting safety performance expectations would be flagged. Then, this design exception could undergo further inspection which may require addition data collection through site visits at various times of the day and weather conditions. Critical elements such as frequency of evaluation, personnel in charge of evaluation, and triggers for further action would need to be clearly outlined in the in-service monitoring process. Such a program would enhance the likelihood of design decisions that reduce safety risks at sites with design exceptions.

CHAPTER 6

CONCLUSION

The current analysis does not address if or how design exceptions influence the safety performance of roadway facilities. An increase (or decrease) in number of accidents may be related to factors such as altering capacity, higher (or lower) traffic volumes, other design changes, random fluctuations in incident rates, etc. Based on the before and after average analysis, it initially appears that a higher percentage of the projects had improved safety performance after the approval of the design exceptions. However, a notable percentage of projects containing design exceptions did have an increase in the numbers of incidents. Currently, it is not known if these changes in numbers of accidents were related to the design exceptions. Because the crash data was collected over the project sites instead of only the design exception locations, the accident rates may not be attributed to design exceptions. Therefore, a potential relationship between design exceptions and the crash data is not determined in this analysis. Clearly there is a strong need for further exploration of the impact of design exceptions on safety performance and development of a program to monitor their performance.

Future research endeavors could include crash analyses by other categories (e.g. weekday vs. weekend, weather, lightening, AADT ranges, travel speed, primary cause of accident, and driver condition). Including additional factors in this study will lead to a more robust crash analysis process in the design exception monitoring program. In addition, effort is required to determine how the HSM may be applied to the evaluation of design exceptions, limitations in the use of the HSM, and the possibility of incorporating

other resources where the HSM cannot be utilized. Many questions still remain unanswered and need to be investigated further. Regardless of the ultimate findings of the ongoing research, it appears hopeful that lessons learned from design exceptions and mitigation measures will be able to be utilized for both short-term and long-term improvements in highway design, operations, and safety.

APPENDIX A: GDOT DESIGN EXCEPTIONS RAW DATA

Table 9: GDOT Design Exceptions from 1995 to 2011

PROJ_CNTY _PROJ_EXT_ PROJ_ID	DS	EXCEPTION _TYPE_CD	APPROVED _DT	COMNT	RC_LINK	MPOINT _ROUTE	MPOINT _BEG	MPOINT _END
0000104	CRABAPPLE STREETSCAPE	2	28-Feb-05	Using 11' lane width on SR372 (Crabapple Road) at the approach to SR372 (Birmingham Hwy) for a distance of 300'.	1210000000	0		
0000104	CRABAPPLE STREETSCAPE	2	28-Feb-05	Using 10' lanes on Mayfield Road for 300' length at the approach to SR372 and on Broadwell Road for a 300' lenght at the approach to SR372.	1210000000	0		
0000135	ETOWAH RIVER GREENWAY/BIKE-PED PATH IN CANTON	4	23-Oct-02	10' bridge instead of 14' bridge (Muti-use Tr.)	570000000	0		
0000184	ATLANTA - LAKEWOOD HEIGHTS TOWN CENTER STREETSCAPE	6	4-Nov-10	DE and DV for existing utility poles on Lakewood Ave., Jonesboro Rd., Adair Ave. Streetscape Enhancement project.	1210000000	0	4.65	4.76
0000259	CR 65/JONES BRIDGE ROAD @ CR 64/DOUGLAS ROAD	8	13-Oct-05	Intersection skew angle of 52 degrees retained (Douglas Road at Jones Mill Road).	1212006500	65		
0000261	CR 70/WEBB BRIDGE ROAD @ PARK BRIDGE PARKWAY/SHIRLEY BR RD	8	24-Oct-08	Intersection Angle (49); Requested add'l infor 7/26; To GR 8/11;	1212007000	70		
0000266	CR 1661/MAYFIELD ROAD @ CR 27/PROVIDENCE ROAD	9	16-Aug-01	Substd Vertical Curve (CR1324)	1212166100	1661		

Table 9 continued

0000266	CR 1661/MAYFIELD ROAD @ CR 27/PROVIDENCE ROAD	8	8-Dec-04	Horiz. Curve on Mayfield Road @ Providence Road.	1212166100	1661	1.56	1.62
0000337	EAST WESLEY SIDEWALK FM PEACHTREE RD TO PIEDMONT RD&BIKE/PED	8	14-Jan-04	One substandard Horiz. Curve (East Wesley Rd)	1213000603	6		
0000399	SR 92 @ CR 204/HILO RD & CR 375/KINGWOOD DRIVE - TURN LANE	9	22-Jun-07	Substandard sag vertical (63.36) for 55 mph (115)	1131009200	92		
0000399	SR 92 @ CR 204/HILO RD & CR 375/KINGWOOD DRIVE - TURN LANE	9	25-Mar-08	Substand vertical sag and crest curves	1131009200	92		
0000418	SR 15 FROM SR 242 TO NEWMAN ST IN SANDERSVILLE	8	7-Jul-06	Substandard intersecting angle (21 degrees);	3031001500	15	14.34	14.34
0000476	CR 1061/OLD SR 5 @ HICKORY RD & HOLLY ST IN HOLLY SPRINGS	9	15-Feb-06	Desgn Exception is for vertical profile of the Hickory Road Leg of the project. The substandard vertical curvature is at the Railroad between Holly Springs Pkwy and Palm Street (R/R is between these two streets along Hickory Road).	572106100	1061		
0000554	ALEXANDER ST FM LUCKIE STREET TO WEST PEACHTREE STREET-GRTA	9	3-Sep-04	Substd VC on Ivan Allen Blvd @ Cent. Olympic Park Drive.	1213181003	1810		
0000683	CR 134/COUNTY LINE ROAD @ POLECAT CREEK @ MURRAY CO LINE	8	12-Jan-06	Horizontal curve runoff lengths between two curves (at back to back s-type curves). This for between curves KC2 and KC3.	1292013400	134		
0000687	CR 4/DENNIS MILL ROAD @ ROCK CREEK 5.6 MI SE OF CHATSWORTH	12	15-Mar-04	Superelevation runoff length between S-curves (CR4/Dennis Mill Rd)	2132000400	4		

Table 9 continued

0000716	HARTSFIELD AIRPORT: RELOC SR 139/RIVERDALE & SR 314/W. FAYET	8	16-Aug-01	Substd Horz. Curve-Sta. 392+91+/- (Riverdale Rd)	631013900	139		
0000762	I-75 FM N OF SR 133 TO COOK COUNTY LINE - PHASE II	3		DE request for inside I-75 inside shoulder widths under bridges at two interchanges. Proposed widths are 11'-2" and 10'-9" instead of required 12'-0". Cost savings are only $12K.	1851040100	401	22	29.4
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	11	12-Jun-08	10.74% on Castleberry Rd	1171000900	9		
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	9	12-Jun-08	Substandard K value (56.72) on SR 371	1171000900	9		
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	9	18-Jun-08	Excessive Breakover (9.28%) on Spot Rd	1171000900	9		
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	8	12-Jun-08	Substandard Intersection Angle (54-32) at Mauldin Dr	1171000900	9		
0000846	CR 325/FH 12/HAMMOND GAP ROAD @ RUFF CREEK NW OF SUBLIGNA	8	28-Oct-03	One substd horiz curve (CR325)	552032500	325	0.32	0.32
0001038	SR 124 @ SR 211	8	10-Jan-11	Substandard transition length on SR 211 near Winder, between I-85 and SR 124	131012400	124	22.4	23.1
0001077	SR 16 FM JEFFERSON AVE TO EAST OF ROOTY CREEK IN EATONTON	9	26-Jun-03	Substd "K" values on N. and S. Grand Ave and substd shoulder width/lane width on S. Putnam St. (SR16 Side Roads)	2371001600	16		
0001097	THURMOND TANNER PWY FM PLAINVIEW RD TO SR 53 - PHASE III	12		Substandard SE transition; DENIED - Advised PM 3/17;	1392000000	0		
0001297	17TH STREET FM NORTHSIDE DR OVER NS RR TO ATLANTIC STATION	13	21-Jun-02	Substd. VC and substd grade (17th Street)	1212000000	0		

Table 9 continued

0001297	17TH STREET FM NORTHSIDE DR OVER NS RR TO ATLANTIC STATION	11	21-Jun-02	Substd. VC and substd grade (17th Street)	1212000000	0		
0001298	I-75/85 ATLANTIC STATION:14TH ST BR; RAMP; WILLIAMS ST RELOC	13		Substand stopping sight distance - 14th St; Spring St; Williams St; W Peachtree St	1211000900	9		
0001298	I-75/85 ATLANTIC STATION:14TH ST BR; RAMP; WILLIAMS ST RELOC	9		PVI Sta 26+60 - Substandard stopping sight distance (455'); To FHWA 6/01	1211000900	9		
0001298	I-75/85 ATLANTIC STATION:14TH ST BR; RAMP; WILLIAMS ST RELOC	9		PVI Sta. 41+35 - Substandard headlight stopping sight distance (353'); To FHWA 6/01;	1211000900	9		
0001298	I-75/85 ATLANTIC STATION:14TH ST BR; RAMP; WILLIAMS ST RELOC	3	29-Jun-06	Jan Hilliard hand carried it down to the Chief Engineer's Office and was to carry it over to FHWA also.	1211000900	9	10.39	10.43
0001364	SR 56/NAIL BRIDGE @ OHOOPEE RIVER 2 MILES W OF REIDSVILLE	13	13-Mar-08	Substandard stopping sight distance - 3 (2 driveways, 1 intersection)	2671005600	56	2.6	3.36
0001364	SR 56/NAIL BRIDGE @ OHOOPEE RIVER 2 MILES W OF REIDSVILLE	9		Substandard K Value (74.70); Denied by Gerald Ross; Returned to D5 12/19/2007	2671005600	56	2.6	3.36
0001365	SR 4/US 1 @ SWIFT CREEK N OF LYONS CITY LIMIT	4	3-Aug-01	BR width/cross slope (SR4/US1)	2791000400	4		
0001398	BUCKHEAD PEDESTRIAN AND TRAFFIC SAFETY IMPROVEMENTS	2	2-Apr-01	10' Lane widths (P'tree Rd)	1210000000	0		
0001558	SR 520 FM W OF BRANTLEY CO LINE TO CR 21/EMANUEL CHURCH RD	8	29-Jan-07	Substandard Intersection Angle - CR 12	251052000	520	27.03	11.25

Table 9 continued

0001559	SR 38/US 84 MEDIAN TURN LANES FM QUITMAN TO VALDOSTA	8	20-Apr-11	DE Request for horizontal curve radius on sideroad.	271003800	38		
0001559	SR 38/US 84 MEDIAN TURN LANES FM QUITMAN TO VALDOSTA	3	20-Apr-11	DE Request for shoulder width at culvert headwall. Project includes installing guardrail at location where there was none before.	271003800	38	4.67	4.75
0001574	SR 3/US 41 FM COBB CO LINE TO SR 293 CONN - MEDIAN TURN LNS	8	26-May-09	Substandard intersection angles - Monroe Crossing/Allatoona Dam Rd/Felton Rd	151000300	3		
0001575	SR 53 MEDIAN TURN LANES FROM EAST ROME BYPASS TO GORDON CO	8	16-Oct-06	Substandard Intersection Angle - Bells Ferry Rd (41o); Tift Rd (45o); Pierce Rd (55o);	1151005300	53		
0001759	I-75 FROM SR 54 NORTH TO AVIATION BLVD - FOR HOV LANES	3		Substandard inside (4') and outside (4') shoulders at SR 54; To FHWA 5/27;	631040100	401		
0001759	I-75 FROM SR 54 NORTH TO AVIATION BLVD - FOR HOV LANES	3		Substandard inside (4') and outside (6'-10") at I-285; To FHWA 5/27;	631040100	401		
0001769	SR 53 @ THOMPSON ROAD/ETOWAH RIVER ROAD	9	30-Oct-10	DE Request to utilize 30 mph & 35 mph curves on Thompson Rd at intersection with SR 53. Received corrections and addl. info. on 6/7/2010. Director of Eng. requested addl info which was rec'd 8/9/2010. Received corrections and addl. 9/24/10	851005300	53	12.89	12.89
0002041	SR 104 @ CR 16/HALALI ROAD IN COLUMBIA COUNTY	9	14-Mar-07	Substandard sag vertical (37mph in 45 DS)	731010400	104	6.96	7.03
0002250	PETTIT CREEK TRAIL PROJECT	4	5-Jul-02	Substd bridge width on muti-use Tr. (Multuse-Path)	150000000	0		
0002282	DOUGLAS GREENWAY TRAIL	4	22-Aug-02	Substd. Br. Width 10' instead of 14' (Muti-use Tr.)	690000000	0		

Table 9 continued

0002799	CHAMBLEE-DUNWOODY RD FM CLAIRVIEW/CUMBERLAND TO BUFORD HWY	2	20-Apr-11	DE request to use 10' wide lanes on Chamblee-Dunwoody Road. (existing condition). Resubmitted on 3/7/2011 after corrections.	892515600	5156		
0002848	RAILROAD STREET TRAIL IN CANTON - PHASE I - LCI PROJECT	6	7-Dec-05	Horizontal Clr to utility poles.	570000000	0		
0002861	SR 40 FM W OF CS 481/GROVE BLVD TO E OF PR 718/TRUSS PLANT	8	8-Jan-10	45 degree intersection skew2009-12-16 BRE - Reviewed, Requested additional information and resubmission	391004000	40		
0003085	CR 140/WHITESVILLE ROAD @ STANDING BOY CREEK TRIB. SOUTH	8	14-Jun-04	One substandard horizontal curve at the begin project (CR140/Whitesville Rd)	1452014000	140	1.89	1.94
0003086	CR 140/WHITESVILLE ROAD @ STANDING BOY CREEK SO OF SR 315	8	14-Jun-04	One substandard horizontal curve at the end project (CR140/Whitesville Rd)	1452014000	140	2.93	2.97
0003090	CR 219/BROWN CREEK RD @ BROWN CREEK 5 MI NW OF WAVERLY HALL	12	12-Apr-05	Omission of SE on aggregate road.	1452021900	219		
0003430	CR 75/CARPENTER RD IN TIFTON FM SR 520/US 82 TO DAVIS RD	8	4-Nov-10	DE Request to retain existing 48 degree skew at intersection of Carpenter Road/Whidden Mill Road. Requested addl. info for mitigation strategies on 9/23/2010.	2772001500	15		
0003430	CR 75/CARPENTER RD IN TIFTON FM SR 520/US 82 TO DAVIS RD	2		DE Request to use 11' lanes. VE implementation item.Determined Carpenter Road is urban minor arterial so 11' lanes are adequate according to AASHTO. Request withdrawn by D4 on 9/23/2010.	2772001500	15		

Table 9 continued

0003452	CR 835/HAPPY VALLEY RD @ CHATTANOOGA & OVERFLOW	12	1-Jun-10	DE requesting 1.04% instead of 1.5% SE due to curve proximity to intersection.	2952083500	835	0.1	0.5
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	11.78	11.86
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	11.99	12.03
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	12.15	12.21
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	12.98	13.02
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.27	13.29
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.3	13.38
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.59	13.63
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.67	13.73
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	8	4-Mar-05	Substandard radius for Horizontal Curve on Norfleet Road at the intersection of Northside Drive. Norfleet Road Intersects Northside Drive at MP 12.4 (Northside Drive Milepost). No MP provided for Norfleet Road.	1211000300	3	12.4	12.4

Table 9 continued

0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	8	4-Mar-05	Substandard radius for Horizontal Curve on Peachtree Battle Ave at the intersection of Northside Drive. P'tree Battle Ave Intersects Northside Drive at MP 13.1 (Northside Drive Milepost). No MP provided for P'tree Battle Ave.	1211000300	3	13.1	13.1
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	4	4-Mar-05	Substandard Bridge Width on Northside Drive @ Peachtree Creek.	1211000300	3	12.8	12.8
0004266	SR 1/US 27 FM SR 151 TO LAFAYETTE BYPASS	9	6-Feb-03	8 substd sag VC (met 1994 but not 2001) (US27/SR1)	2951000100	1		
0004399	PONCE DE LEON @5 LOC; NORTH AVE @5 LOC; LINDEN @2 LOC - GRTA	8		Lane Shift - North Ave at W Peachtree	1211000800	8		
0004399	PONCE DE LEON @5 LOC; NORTH AVE @5 LOC; LINDEN @2 LOC - GRTA	8		Lane Shift - W Peachtree at Ponce de Leaon	1211000800	8		
0004399	PONCE DE LEON @5 LOC; NORTH AVE @5 LOC; LINDEN @2 LOC - GRTA	2	18-Mar-10	Exception for 9' lane widths at 12 intersection locations in Atlanta	1211000800	8		
0004403	SR 3 CONN @ SR 120 ALT - GRTA	3	25-Jun-09	1.5' Inside Shoulder adjacent to barrier	06710003C O	3		
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	8	18-Jan-08	Substandard intersection angle (55-19-23 Floyd Rd); Returned to D7 12/19/2007; Resubmitted to G Ross 1/15/2008;	671000500	5		
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	8	5-Feb-08	Substandard radii for 35 mph speed design (373') (100' - Sandtown & 170' - Olive Springs)	671000500	5		
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	3	10-Apr-08	Substandard shoulder width; Returned to D7 for corrections 3/26; sent to Chief Engineer on 4/9/08	671000500	5		

Table 9 continued

0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	1	5-Feb-08	Substandard speed design (21-Sandtown & 25-Olive Springs)	671000500	5		
0004424	CR 7001/PERIMETER CENTER PARKWAY STREETSCAPE - GRTA	8	10-Jan-05	Retain an existing substandard Horiz Curve radius at PC station 116+75.58. Perimeter Center Parkway.	892700100	7001		
0004446	LEWIS RD FM SR 6/CH JAMES PKWY TO SR 6BU/NEW S SQ [PE-LCI]	8	22-Feb-08	Substandard intersection angle (58-04-13)	672212200	2122		
0004650	CR 666/SIGMAN ROAD @ CR 157/GEES MILL ROAD - GRTA	8	29-Jul-08	Substandard intersection angle (58)	2472066600	666		
0005071	I-95 FM NORTH OF SR 303 TO CR 586	9	16-Nov-05	Substandard vertical curve k value at station 28+00.	1271040500	405	33.56	33.66
0005531	SR 191 @ SCULL SHOAL CREEK 4 MILES NE OF DANIELSVILLE	12	20-Feb-11	DE Request for SE of 8% instead of 6% on bridge replacement project.	1951019100	191		
0005531	SR 191 @ SCULL SHOAL CREEK 4 MILES NE OF DANIELSVILLE	8	20-Feb-11	DE Request for substandard horizontal curve length.	1951019100	191		
0005905	CR 5150/PANOLA ROAD FM THOMPSON MILL ROAD TO FAIRINGTON ROAD	8	20-Jan-10	Design Exception - 58 Degree skew	892515000	5150		
0006016	I-75 FROM SR 32 TO SR 159	6	1-Dec-03	Substd Horiz. Clr. On I-75 at SR32 and SR159 (I-75)	2871040100	401		
0006043	I-575 @ ROPE MILL CONNECTOR/RIDGEWALK PKWY - NEW INTERCHANGE	6	23-Sep-10	DV for lateral offset to utility box behind sidewalk 10.5' versus recommended 12'	571041700	417	8.2	10
0006073	I-75 FM COOK COUNTY LINE TO CR 204/SOUTHWELL BLVD - PHASE I	6	29-Mar-04	Horiz Clr at overpass (I-75)	2771040100	401		

Table 9 continued

0006332	I-85 FM CAMP CREEK PKWY TO SR 74 - ATMS COMMUNIC/SURVEILANCE	2		10' lanes on Ramps at the following locations: I-85 NB at SR74, SR138, Flat Shoals Road, and Riverdale Road and I-85 SB at SR138 and Flat Shoals Road.	1211040300	403		
0006334	I-75 FM WADE GREEN RD TO SR 92 - ATMS COMMUNIC/SURVEILANCE	2		PM states Design Exception no longer needed.	671040100	401		
0006365	SR 20 @ SR 212	3	2-May-08	Design Exception for Sub-Standard shoulder width on S.R. 20/S.R. 212 south of the Brown Bridge Road intersection. Called George Brewer on 4/10/08 to rewrite the letter to delete "Clear Zone" DE Request.; Resubmit 04/29/2008	2171002000	20	0.3	0.6
0006396	I-75 N ATMS RAMP METERS FROM I-85 TO CR 4395/CHASTAIN ROAD	3		1.9' inside shoulder, 1.5' - 13' outside shoulder for Ramp Metering; To FHWA 5/12;	671040100	401		
0006397	I-85 N ATMS RAMP METERS FM BUFORD HWY TO PLEASANT HILL	2		10' lanes on Ramps at the following locations: Indian Trail NB & SB, Beaver Ruin Road NB & SB, Steve Reynolds Blvd SB, and Pleasant Hill Road SB.	1351040300	403		
0006399	I-75/I-85 ATMS RAMP METERS FM UNIVERSITY AVE TO 10TH ST	3		I-75/85 Ramp Metering; 0'-10' inside and outside shoulders on ramps; To FHWA 05/12/2006;	1211040300	403		

Table 9 continued

0006399	I-75/I-85 ATMS RAMP METERS FM UNIVERSITY AVE TO 10TH ST	2		10' lanes on Ramps at the following locations: University Ave NB & SB, Ralph Abernathy Blvd SB, Fulton St. NB, MLK Jr. Drive NB, JW Dobbs Ave NB, International Dr/Freedom Pkwy NB, and Spring/Williams St. NB.	1211040300	403		
0006399	I-75/I-85 ATMS RAMP METERS FM UNIVERSITY AVE TO 10TH ST	2		Substandard acceleration distance (730' vs 960') on John Wesley Dobbs Ramp; To FHWA 05/12	1211040300	403		
0006402	I-20 FM I-285/FULTON TO I-285/DEKALB - ATMS RAMP METERS	3	20-Feb-07	Sustandard (2') shoulder width for ATMS ramp metering; To FHWA 1/29/07	891040200	402		
0006432	CR 251/SEVEN ISLANDS RD @ BIG INDIAN CREEK & OVERFLOW	2	3-Aug-10	DE request for 10' lane width to match existing conditions on bridge replacement project.	2112025100	251	1.84	2.24
0006471	CR 69/BROWNS CROSSING ROAD @ FISHING CREEK	2	17-Apr-09	9' Travel lanes; Returned for more information3/23; To GR 4/14;	92006900	69	2.686	2.797
0006471	CR 69/BROWNS CROSSING ROAD @ FISHING CREEK	2	17-Apr-09	9' Lanes	92006900	69		
0006572	ANSLEY PARK PEDESTRIAN & STREETSCAPE PROJECT	6	25-May-10	Request for DE - lateral offset to obstruction - existing trees and utility poles less than 1.5' from EOP (25 MPH design and speed limit) Peachtree Circle.	1210000000	0		
0006867	CR 895/TOWER ROAD FROM SR 5/CHURCH STREET TO RR #340395	3	24-Oct-08	Substandard shoulder width (0'-5'-2")	672089500	895		
0006887	CITY OF LITHONIA STREETSCAPE AND SIDEWALKS	8		Intersection Angle (42)	890000000	0		

Table 9 continued

0006902	CR 812/CHAPEL HILL RD @ CR 153/DOUGLAS BLVD/TIMBER RIDGE DR	8		Substandard minimum radii (550', 600'); Returned 8/03 for additional information;	972081200	812		
0006952	SIMPSON STREET/JONES AVE FM NORTHSIDE DR TO LUCKIE ST- GRTA	9	3-Sep-04	Substd VC on Ivan Allen Blvd @ Marietta Street.	1213240903	2409	2.7	2.7
0006957	CR 130/CANNON ROAD @ WHITE OAK CREEK 3.5 MI NE OF MORELAND	12		Substandard superelevation (4.85%)	772013000	130		
0006957	CR 130/CANNON ROAD @ WHITE OAK CREEK 3.5 MI NE OF MORELAND	8		Substandard Radius for 45 mph (515')	772013000	130		
0006979	SR 154 FROM FRASER STREET TO CONNALLY STREET - LCI PROJECT	9	9-Jul-09	Substandard Vertical Curve Sta. 14+50 to Sta. 19+00	1211015400	154		
0006989	NORCROSS DOWNTOWN PEDESTRIAN STREETSCAPES - LCI PROJECT	6	2-May-06	Offset distance to utility poles. Distance is 2'-10" from center of pole to face of curb.	1350000000	0		
0006989	NORCROSS DOWNTOWN PEDESTRIAN STREETSCAPES - LCI PROJECT	2	2-May-06	Lane widths of 9'-5" to 10'-8"	1350000000	0		
0007020	CS 540/ROCK LANE ROAD @ NS #733038W	8	6-Sep-05	One Substd. Horizontal Curve (Radius length) on CS540/Rock Lane Road @ NSRR/Forrest Street.	2373054001	540		
0007061	SR 141/MEDLOCK BRIDGE ROAD @ SR 120/ABBOTTS BRIDGE ROAD	3	12-Mar-11	DE/ DV REQUEST PROPOSES TO RETAIN EXISTING SHOULDER WIDTH ON THIS INTERSECTION IMPROVEMENT PROJECT - SR 141@SR 120 - 55 MPH ON SR 141 C&G SECTION.	1211012000	120		
0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	13	27-Feb-07	Substandard Intersection Sight Distance (390') on Bright Star Road	971000500	5		

Table 9 continued

0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	9	27-Feb-07	Substandard "K" value (29) for Bright Star Road	971000500	5		
0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	8	27-Feb-07	Substandard radius (371') for Bright Star Road	971000500	5		
0007070	SR 140/HOLCOMB BRIDGE ROAD @ CR 107/BARNWELL ROAD	13	12-Oct-08	Returned 7/02 for plan sheets; To GR 8/11;	1211014000	140		
0007096	CR 1385/BUFFINGTON RD FM I-85 TO SR 14/US 29/ROOSEVELT HWY	9	10-Jan-11	DE Request for two substandard vertical curves on this pedestrian & intersection improvement project.	1212138500	1385		
0007131	SR 10/MEMORIAL DRIVE FM WOODCROFT RD TO GOLDSMITH RD	8	18-May-09	50 degree intersection angle - N Hairiston Rd	891001000	10		
0007169	SR 136 @ ETOWAH RIVER 5.7 MI EAST OF DAWSONVILLE	9		DE request for retain substandard existing sag vertical curve on bridge replacement project. SR 36 over Etowah River.	851013600	136	22.7	23
0007217	SOCIAL CIRCLE BYPASS FROM EAST HIGHTOWER TRAIL TO SR 11	8		Substandard radius (1060'); Returned 3/3/2008 for add'l info; resubmitted to Chief Engineer on 4/9/08. JSS - Rec'd in ODPS on 1/28/10. Requested corrections. Resubmitted on 3/5/10.	2170000000	0	13.04	13.1
0007240	I-985/US 23 @ SR 11/US 129	8	24-Apr-07	Substandard curve radii and length; To FHWA 4/02/2007;	1391041900	419	7.85	8.27
0007392	CR 154/OLD BUCKHEAD ROAD @ NORTH SUGAR CREEK	3	5-Aug-09	Shoulder width (6'-2' paved)	2112015400	154	1.25	1.55
0007415	SR 242 @ CR 210/WACO MILL RD & @ CS 659/SOUTH HOSPITAL RD	8	12-Jul-11	DE request to retain 2 existing intersection skew angles of 46 and 45 degrees (SR 242 atWaco Mill Road and SR 242 at Hospital Road.)	3031024200	242	4.55	4.58

Table 9 continued

0007493	SR 70/SR 154 @ SR 92/CAMPBELLTON-FAIRBURN ROAD	13	10-Oct-06	Substandard K value SR 70; Substandard stopping sight distance(498)	1211007000	70	14.4	14.68
0007493	SR 70/SR 154 @ SR 92/CAMPBELLTON-FAIRBURN ROAD	8		Substandard intersection skew angle (50)	1211007000	70	14.4	14.68
0007641	ATLANTA RD MULTI-USE TRAIL FM SPRING/CONCORD RD TO RIDGE RD	6	19-Aug-09	Horizontal Clearance to Retaining Wall	670000000	0		
0007950	CR 812/CHAPEL HILL RD @ CR 160/CENTRAL & BOMAR CHURCH RD	9	18-Jul-06	Substandard Vertical Curve (K=49.29)	972081200	812		
0007950	CR 812/CHAPEL HILL RD @ CR 160/CENTRAL & BOMAR CHURCH RD	8	18-Jul-06	Substandard radius length	972081200	812		
0008066	MAYSVILLE STREETSCAPE - PHASE I & II	6	15-May-09	Horizontal clearance to power pole (10")	111005200	52		
0008137	CS 6000/DOUG DAVIS DR/VIRGINIA AVE STREETSCAPES IN HAPEVILLE	2		2 - Lane Width (8'-7" & 8'-9")	1213600011	6000		
0008194	CUTHBERT DOWNTOWN SQUARE STREETSCAPE IN RANDOLPH COUNTY	6	12-Mar-11	DV and DE request for lateral offset to obstruction (utility and light poles) along the square in Cuthbert.	2431005000	50		
0008234	I-85 NB FROM I-985 TO SR 20	13	18-Dec-06	Substandard Stopping Sight Distance for 70 mph (696'); To FHWA 10/27;	1351040300	403	15.92	16.11
0008234	I-85 NB FROM I-985 TO SR 20	13	18-Dec-06	Substandard Stopping Sight Distance for 70 mph (696'); To FHWA 10/27	1351040300	403	16.26	16.49
0008274	I-75 SB FM I-675 TO EAGLES LANDING PKWY-AUXILIARY LANE	3	14-Dec-06	Substand inside shoulder width at Walt Stephend Rd overpass; To FHWA 12/06	1511040100	401		

Table 9 continued

0008295	SR 120/OLD MILTON PKWY @ CS 9216/NORTH POINT PKWY	9	12-Mar-11	DE request for retaining substandard vertical alignment at the intersection of SR 120 and North Point Parkway.	1211012000	120	1.22	1.39
0008296	CR 452/HERNDON ROAD @ ROCKY CREEK 9.5 MI S OF WAYNESBORO	2	18-Mar-10	10' Lane width on local road; Add info 11-4; Received updated request on 3-2-10	332045200	452		
0008299	CR 1349/FAIRBURN ROAD @ CSX RR	9	12-Mar-11	DE request on bridge replacement project on Fairburn Road proposes to retain existing vertical alignment at end of RR bridge to avoid impacts	1212134900	1349		
0008374	SR 236/LAVISTA ROAD @ OAK GROVE ROAD	8	25-May-10	DE requested for 154' (25 mph) radius curve instaed of 371' (35 mph) radius on Oak Grove Rd approaching Lavista Rd (SR 236) posted speed will be 25 mph.	891023600	236	3.47	3.67
0008396	CR 146/GALILEE CHURCH ROAD @ MIDDLE OCONEE RIVER	3	19-Aug-09	6' shoulder (1.24-1.30 & 1.36-1.47) - Galiliee Church Rd	1572014600	146		
0008409	SR 26/US 80 @ SR 30/US 280	8	9-Mar-09	Substandard Radius (400'); Returned for more info; 02-27-2009 Received from D5; 3-02-2009 Requested S&M plan;	291002600	26	4.3	4.7
0008635	SCHATULGA RD/EASTERN CONN FM CHATSWORTH RD TO SR 22/MACON RD	9	25-May-10	Exception for sidestreet vertical alignment approaching RR. Requested more information 3/17/2010. Rec'd 4/23/2010	2152003600	36		
0008965	SR 20 WB FM MP 20.24 TO MP 21.86	8		Substandard distance between reverse curve (68.2'); Retirned for add info 5-29; Returned 7/6 for add info	151002000	20		

Table 9 continued

0009069	HISTORIC DOWNTOWN BUFORD STREETSCAPE - PHASE V	6	20-Feb-11	DE Request for 2.5' lateral offset, FOC to center of trees. Main Street in Buford streetscape project.	1350000000	0		
0009091	PINE MOUNTAIN DOWNTOWN STREETSCAPE - PHASE IV	6		Design Exception request for lateral offset to obstruction - utility poles adjacent to angled parking along McDougald Ave. in Pine Mountain. Design Exception NOT required due to curb & poles not adjacent to traveled way.	1450000000	0		
0009099	WADLEY DOWNTOWN STREETSCAPE	6	20-Apr-11	DE Request for lateral offset (1.2 feet) to existing utility pole along Butts Street (City of Wadley streetscape project) Resubmitted on 3/16/2011 after corrections.	1630000000	0		
0009138	LAFAYETTE DOWNTOWN STREETSCAPE - PHASE II	6		DE Request to maintain utility poles at < 18" from EOP. City streets in downtown LaFayette, 25 mph. Determined DE not required due to existing condition on streetscape project, 25 mph, no history of accidents, etc. See 5/28/10 e-mail.	2950000000	0		
0009156	I-75 FM EAGLES LANDING PKWY TO SR 155 - MANAGED LANES - PH I	3		DE request for I-75 inside shoulder width of 8' instead of 10' or 12'	1511040100	401	216.26	228.5
0009156	I-75 FM EAGLES LANDING PKWY TO SR 155 - MANAGED LANES - PH I	2		DE request for 11' lanes in the managed lanes section instead of 12' lanes.	1511040100	401	216.26	228.5
0009157	I-75 FM SR 138 TO EAGLES LANDING PKWY - MANAGED LANES - PH I	3		See 0009156	1511040100	401		

Table 9 continued

0009157	I-75 FM SR 138 TO EAGLES LANDING PKWY - MANAGED LANES - PH I	2		See 0009156	1511040100	401		
0009159	I-285 @ SR 9 IN SANDY SPRINGS-BRIDGE SAFETY&OPERATIONAL IMP	10	11-Mar-11	DE Request to maintain existing crosslopes on Roswell Road of 2 to 4 percent. (also applies to 0009160)	1211040700	407		
0009542	I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD - CD SYSTEM	4	22-Oct-10	DE request to maintain existing bridge width of 54' instead of normal 68' on I-20 bridge over Snapfinger Creek. Received FHWA comments on 6/11/2010. Received revised DE request to resubmit to FHWA on 7/28/2010	891040200	402	69.67	69.72
0009542	I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD - CD SYSTEM	3	22-Oct-10	DE request to maintain Inside shoulder width on I-20 of 5'-0" to 6'-9"	891040200	402	66.64	74.08
0009542	I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD - CD SYSTEM	3	22-Oct-10	DE request to utilize 3'-0" outside shoulder on I-20 bridge over Snapfinger Creek	891040200	402	69.67	69.72
0009542	I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD - CD SYSTEM	3	22-Oct-10	DE request to utilize 2'-0" wide shoulder on I-20 under Miller Road bridge	891040200	402	70.48	70.5
0009542	I-20 EB FROM I-285 TO CR 5150/PANOLA ROAD - CD SYSTEM	2	22-Oct-10	DE request to utilize 11' wide lanes instaed of 12' wide	891040200	402	69.65	70.51
0009725	I-285 @ CR 1764/ASHFORD DUNWOODY ROAD	8	20-Jun-11	DE Request for curve radius and superelevation on curves at DDI interchange at I-285/Ashford Dunwoody Road.	891040700	407	0.77	1.24

Table 9 continued

0010126	I-75 NB FM CR 659/EAGLES LANDING PKWY/HUDSON BRIDGE TO I-675	3	20-Apr-11	DE request for substandard inside shoulder width. Retaining the exist. I-75 bridge over Flippen Road will result in a substandard inside shoulder width on the bridge due to the project's lane addition.	1511040100	401	225.91	226
0010194	WEST CLEVELAND BYP FROM N OF SR 115 TO E OF SR 11 - PH II	9		DE Request for substandard vertical alignment on sideroad off of West Cleveland Bypass.	3110000000	0		
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	403	104.4	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	403	105.2	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	403	105.7	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	403	105.8	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB I-85. (PVI MP)	1351040300	403	104.4	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB I-85. (PVI MP)	1351040300	403	105.6	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB Collector Distributor PVI Station 36+25. (PVI MP for I-85))	1351040300	403	104.1	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB Collector Distributor PVI Station 378+90.25. (PVI MP for I-85)	1351040300	403	104.1	

Table 9 continued

110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SR316 EB Station 925+66.05. (PVI MP I-85)	1351040300	403	105.7	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shouler Width I-85 NB at Pleasant Hill Road Overpass.	1351040300	403	104.1	
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shoulder Width I-85 Boggs Road to 1.44 miles north of Old Peachtree Road (3'-8" shoulder at Boggs Road, SR120, and Old P'Tree Road Overpasses.	1351040300	403	106.3	110.4
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shoulder Width on SR 316 from I-85 to Herrington Road 5' 10" inside shoulders (3' - 5" shoulders at Boggs Road and Breckinridge Boulevard).	1351040300	403	0.7	0.9
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	2	9-Sep-05	Lane Width I-85 NB at Pleasant Hill Road Overpass	1351040300	403	104	104
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	2	9-Sep-05	Lane Width I-85 SB south of SR316 interchange.	1351040300	403	104.1	
110600-	I-85 FM I-985 TO N OF CR 134/HAMILTON MILL RD	9		DE Request to use 1990 AASHTO design criteria for sag vertical curves at four locations on I-85 between Hamilton Mill Road and SR 211, in lieu of 2004 Green Book criteria. (70 mph design speed) DE withdrawn by designer on 8/6/2010	1351040300	403	121.14	125.1
110610-	I-85 FM N OF CR 134/HAMILTON MILL ROAD TO N OF SR 211	9		See 110600	131040300	403		

Table 9 continued

110620-	I-85 FM N OF SR 211/BARROW TO N OF SR 53/JACKSON	3	30-Oct-06	Substandard inside shoulder width (8'-9" & 9'-8") at overheas sign supports and bridge columns; To FHWA 5/12;	131040300	403	125.4	129.8
110640-	I-85 FM N OF SR 11 TO N OF SR 82	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	137.5	137.5
110640-	I-85 FM N OF SR 11 TO N OF SR 82	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	140.4	
110650-	I-85 FM N OF SR 82 TO N OF SR 98	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	141.4	141.4
110650-	I-85 FM N OF SR 82 TO N OF SR 98	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	143.1	143.1
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	146.6	146.6
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-4"	1571040300	403	146.7	146.7
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	403	149.3	149.3
110670-	I-85 FM N OF SR 15/US 441 TO N OF SR 63	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	403	153.75	153.8
110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	403	155.44	155.4
110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	403	157.39	157.4
110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	403	159.86	159.9
110690-	I-85 FM N OF SR 51 TO N OF SR 320	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	162.23	162.2
110690-	I-85 FM N OF SR 51 TO N OF SR 320	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	163.9	163.9
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	164.82	164.8
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	165.93	165.9

Table 9 continued

110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	167.9	167.9
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	170.03	170
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	173.14	173.1
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	403	173.24	173.2
110710-	I-85 FM N OF SR 17 TO N/SC STATE LINE IN HART	3	5-Jun-08	Inside shoulder width (9'-10") - 3 locations (174.83; 176.08; 177.29)	1191040300	403	174.83	177.3
121720-	SR 124 FM CENTERVILLE-ROSEBUD RD TO HENRY CLOWER BLVD	9	22-Jan-98	FOUR SIDE STREETS (CS)	1351012400	124		
121720-	SR 124 FM CENTERVILLE-ROSEBUD RD TO HENRY CLOWER BLVD	8	22-Jan-98	FOUR SIDE STREETS (CS)	1351012400	124		
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	9	10-Oct-07	Substandard "K" value on Nowhere Road (13.5	592060000	600		
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	1	10-Oct-07	Boley Road (26 mph)	592060000	600		
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	1	10-Oct-07	Nowhere Road (25 mph)	592060000	600		
122320-	SR 15/US 441 FM N OF TALLULAH FALLS TO S CL OF CLAYTON	9	8-Mar-04	MP 1.89, 1.96, 1.92, 3.42, 7.95, 7.96, 8.73, 8.77, 9.45 (meets 1994 ASSHTO not 2001) (SR15/US441)	2411001500	15	1.89	9.45
122320-	SR 15/US 441 FM N OF TALLULAH FALLS TO S CL OF CLAYTON	3	5-Feb-02	Substd shldr width/DV outside shldr (US441/SR15)	2411001500	15	1.8	
122400-	SR 53 NEAR HOSCHTON NB FM MP 6.8-8.4 [N&S OF CR 421]	3	20-Apr-99	(SR53)	1571005300	53	6.8	8

Table 9 continued

122400-	SR 53 NEAR HOSCHTON NB FM MP 6.8-8.4 [N&S OF CR 421]	3	30-Jun-99	(SR53)	1571005300	53	6.8	8
122440-	SR 17 FM 3-LANE @ BEAVERDAM CK TO SR 115	9	9-Sep-02	1-substandard VC "K" value (SR17/115)	1371001700	17	9.02	10.02
122850-	SR 10 LOOP @ CR 141/PETER STREET/OLYMPIC DRIVE	9	25-May-10	Corrections to original rec'd 4/27-10. Requested profile sheet on 4/27/10.	05910010LO	10	5.9	6.1
132230-	SR 51 RELOC FM MAIN ST ALONG ATHENS ST/MOON DR TO SR 51	8	26-Jun-96	(SR51)			1.2	1.3
132660-	SR 10/US 78 FM CR 166/WHIT DAVIS RD TO CR 26/SMOKEY/& OGLETH	2		DE request to use 11' inside lanes on US 78 in Clark/Oglethorpe Cos. Corrections made and re-submitted on 8/15/2011.	591001000	10	17.33	3.4
132670-	SR 53 @ CR 4/ROCKWELL CHURCH RD NORTH OF WINDER	11	10-Feb-99	(SR53)	131005300	53	13.5	14.1
142230-	CR 127/OLD HULL RD FM CR 600/NORTH AVE TO CR 1149/4TH ST	8	12-Jul-11	Design exception request to retain existing horizontal curve on Old Hull Road approaching North Avenue. Note: Chief Engineer approved on 7/12/2011. It was then determined that project was F.O.S. so FHWA approved/signed on 8/8/2011.	592012700	127		
142291-	SR 284 @ CHATTAHOOCHEE RVR/LAKE LANIER 4 MI N OF GAINESVILLE	9	20-Feb-11	DE Request for sag vertical curve on local subdivision road. Bridge replacement project.	1391028400	284		
150210-	CR 473/EPPS BRIDGE RD FM SR 10 TO SR 10 BU/US 78/CLARKE CO	11	19-Jan-96	(SR10)	2191090000	900	4.76	5.16

Table 9 continued

150210-	CR 473/EPPS BRIDGE RD FM SR 10 TO SR 10 BU/US 78/CLARKE CO	9	31-Jan-97	TAWNBERRY DRIVE (CR432)	591070000	700		
150210-	CR 473/EPPS BRIDGE RD FM SR 10 TO SR 10 BU/US 78/CLARKE CO	9	31-Jan-97	WINTERBERRY DRIVE (CR432)	591070000	700		
150210-	CR 473/EPPS BRIDGE RD FM SR 10 TO SR 10 BU/US 78/CLARKE CO	9	31-Jan-97	TELFAIR DRIVE (CR206)	591070000	700		
150210-	CR 473/EPPS BRIDGE RD FM SR 10 TO SR 10 BU/US 78/CLARKE CO	9	31-Jan-97	WINDY HILL COURT WEST (CR680)	591070000	700		
162390-	W CLEVELAND BYP FM S OF HOPE DR TO N OF SR 115 - PH I	9	28-Sep-10	DE Req. for not meeting K value on side roads (Hope Drive and Tesnatee Gap Valley Road) Resubmitted with corrections on 9/21/2010.	3111096200	962	4.68	
170900-	CR 213 OVER WATERS/DICKS CREEK	4	8-Sep-95	(CR213)				
170900-	CR 213 OVER WATERS/DICKS CREEK	2	6-Sep-95	(CR213)				
171004-	CR 86/JEFFERSON RIVER RD @ CURRY CREEK 3.6 MI E OF ARCADE	9	25-Feb-03	2 substd. Vertical Curves (CR86/Jefferson River Rd.)	1572008600	86		
171210-	CR 235/ALCOVY ROAD @ ALCOVY RIVER 3 MI NE OF LAWRENCEVILLE	11	8-Sep-97	(CR235)	1352023500	235		
171560-	MULTI-USE TRAIL FM MARTIN FARM ROAD TO SR 13/BUFORD HIGHWAY	4	3-Oct-02	8' instead of 12' boardwalk on Trail (Multi-use Tr.)	1350000000	0		
210440-	I-520 FM NORTH OF I-20 TO SR 4/US 1|REPR & PART WIDEN TO 6LN	3	16-Jun-97	(I-520)	2451041500	415	0	0.16
210440-	I-520 FM NORTH OF I-20 TO SR 4/US 1|REPR & PART WIDEN TO 6LN	3	16-Jun-97	(I-520)	2451041500	415	0.53	0.89

Table 9 continued

210440-	I-520 FM NORTH OF I-20 TO SR 4/US 1|REPR & PART WIDEN TO 6LN	3	16-Jun-97	(SR232)	2451041500	415	0.52	0.65
210660-	I-16 AT TURKEY CK-PUGHES CK & MERCER CK	12	11-Aug-98	(I-16)	1751040400	404	65.65	65.88
210810-	I-20 FM ALCOVY ROAD INCL INTERCHANGE TO SR 142 IN COVINGTON	8	28-Jun-06	Substandard radiuss - City Pond Rd & Industrial Drive	2172007400	74		
210890-	BRIDGE JACKING IN DISTRICT 2	3	6-Jul-99	(Design exception in Newton - SR12)	ALL0000000	0	15.63	15.63
220680-	SR 4/15TH ST/AUGUSTA FM MILLEDGEVILLE RD TO GOVERNMENT ST	8	10-Jan-11	DE Request for substandard horizontal curve length, radius, SE and intersection skew angle.	2451000400	4		
221180-	SR 56 FM SR 56 SPUR/BURKE TO N OF BENNOCK MILL|PART NEW LOC	11	16-Dec-96	(SR56)	331005600	56	35.4	5.52
221180-	SR 56 FM SR 56 SPUR/BURKE TO N OF BENNOCK MILL|PART NEW LOC	11	16-Dec-96	(SR56)	2451005600	56	0.32	5.54
221540-	SR 19/26 CONSTRUCT TURN LANES @ LAURENS CO ELEMENTARY SCH	11	9-Apr-99	(CR482)	1751001900	19		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	13	15-Feb-99	(CR49)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	13	15-Feb-99	(CR251)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	13	15-Feb-99	(CR250)	911002700	27		

Table 9 continued

221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	13	15-Feb-99	(CR248)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	13	9-Apr-99	(CR346)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	8	9-Apr-99	(CR346)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	1	15-Feb-99	(CR49)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	1	15-Feb-99	(CR251)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	1	15-Feb-99	(CR250)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	1	15-Feb-99	(CR248)	911002700	27		
221940-	SR 27/US 341 FM 4700' SE/CR 266 TO WEST CL/CHAUNCEY	1	9-Apr-99	(CR346)	911002700	27		
222350-	I-520 @ SR 56 ADD WB LOOP & ADD LANES ON SR 56	10	4-Jun-99	(I-520)	2451041500	415	8	9.2
222350-	I-520 @ SR 56 ADD WB LOOP & ADD LANES ON SR 56	7	4-Jun-99	(I-520)	2451041500	415	8	9.2
222350-	I-520 @ SR 56 ADD WB LOOP & ADD LANES ON SR 56	3	4-Jun-99	(I-520)	2451041500	415	8	9.2

Table 9 continued

222460-	SR 10: OGLETHORPE MP13.7-15;15.3-16.2& WILKES: 0-1.5;5.5-7.0	9		Passing lane project proposes to retain existing profile that contains 4 substandard vertical curves and one substandard grade. Request denied 10/21/2010. Direction given to upgrade profile to meet current standards.	2211001000	10	13.8	14.3
222550-	SR 121/US 25/SAVANNAH RVR PKWY FM CR 16 TO CR 118/BURKE	9	21-Nov-02	Substandard Vertical Curve (meets 94 AASHTO) (SR121)	1651012100	121		
231150-	CR 191 @ OGEECHEE RIVER OVERFLOW N OF EMANUEL COUNTY LINE	2	18-Mar-10	Exception for lane width of 10' on CR 191 bridge replacement project.	1652019100	191	1.05	1.09
231152-	CR 191 @ OGEECHEE RIVER NORTH OF EMANUEL COUNTY LINE	2	18-Mar-10	Exception for 10' lane width on CR 191 bridge replacement project.	1652019100	191	1.61	1.79
231220-	SR 142 FM SOUTH OF SR 12/US 278 TO CR 72 IN COVINGTON	12	8-Aug-07	Substandard superelevation (1.0%)	2171014200	142	8.4	11.56
231910-	CRAWFORD/LEXINGTON BYP FM E OF CR 26/SMOKEY RD TO E OF SR 22	2		DE request to use 11' inside lanes on US 78 in Oglethorpe Co.	2211001000	10		
232240-	SR 22/SR 24 @ CR 472/LAKE LAUREL RD EAST OF MILLEDGEVILLE	8	13-Aug-03	Reverse curves SE Rate and transition (SR22)	91002200	22	13.41	13.83
232260-	SR 22 @ CS 558/TATTNALL STREET IN WEST MILLEDGEVILLE	9	12-Mar-07	Substandard K value (8.90) for 35 mph on Tattnall Street	91002200	22		
232260-	SR 22 @ CS 558/TATTNALL STREET IN WEST MILLEDGEVILLE	7	2-May-06	14'-6" vertical clearance on SR 22 over CS 558/Tatnall Street	91002200	22	10.05	10.05

Table 9 continued

232310-	SR 47 @ LITTLE RIVER 10.5 MI SE OF LINCOLNTON	3	12-Mar-11	DE request on bridge replacement project Columbia/Lincoln Co. SR 47 over Lake Thurmond proposes to use 6' instead of 8' wide shoulders due to terrain and impacts.	731004700	47		
232315-	SR 77 @ GOOSEPOND CREEK 14.5 MI NE OF LEXINGTON	9	10-Sep-03	One Substd. Sag Vert. Curve meets 1994 not 2001 AASHTO (SR77)	2211007700	77	31.76	31.98
245370-	SR 22 @ LONG CREEK 3.5 MI S OF LEXINGTON	9	19-Aug-03	One substandard vertical curve (meets 94 but not 2001) (SR22)	2211002200	22	11.3	11.52
245371-	SR 22 @ BIG CLOUDS CREEK 3.8 MI E OF SMITHSONIA	9	10-Sep-03	One Substd. Sag Vert. Curve meets 1994 not 2001 AASHTO (SR22)	2211002200	22	24.34	24.56
245400-	SR 83/BOSTWICK HWY @ LITTLE SANDY CRK 4.6 MI S OF BOSTWICK	9		Substandard K-value (Prospect Rd and Flat Rock Rd approaches to SR 83); Requested signing and marking plans 9/28; Rec'd request from OPD on 2/4/10 - JSS Design modified so that exception not reqd. 2/25/2010.	2111008300	83	0.01	0.03
262370-	CR 160/THOMAS FIELD RD FM SR 243/US 441B TO CR 425/OGDEN RD	11	30-Jan-96	(CR160)	98016000	160		
262370-	CR 160/THOMAS FIELD RD FM SR 243/US 441B TO CR 425/OGDEN RD	11	30-Jan-96	(CR160)	92046700	467		
311380-	I-75 @ SR 36 FM .5 MI SW/I-75 TO.55 MI NE/I-75 & BR / LAMAR	12	29-Sep-96	(CR)	351040100	401		
311445-	I-185/COLUMBUS FM SR 520 TO ST MARYS ROAD	3		Median shoulder width less than 3 m (10'). Request to use existing width of 2.12 m (7' +/-).	2151041100	411	0	0.46

Table 9 continued

311445-	I-185/COLUMBUS FM SR 520 TO ST MARYS ROAD	3		Median shoulder width less than 3 m (10'). Request to use existing width of 2.12 m (7' +/-).	2151041100	411	1.47	2.38
311445-	I-185/COLUMBUS FM SR 520 TO ST MARYS ROAD	3		Substandard median shoulder width (2.13 m - 7'); To FHWA 6/9/2006;	2151041100	411	1.85	2.86
311630-	I-185 INTERCHANGE @ SR 1/SR 520	8	22-Jun-06	Substandard horizontal curve radius (340') on ramp from I-85 SB to US 27/SR 1 WB	2151041100	411	0	0.4
311685-	I-16 FM JCT I-75 TO TWIGGS/BLECKLEY CL...TWIGGS	3	27-Jan-95	(I-16)			1.14	1.18
311700-	I-75 @ THE PROPOSED RICHARD RUSSELL PARKWAY	9	5-Dec-01	Substd sag VC "K" (Houser Mill Rd)	2251040100	401		
312113-	I-75 SAFETY UPGRADES @ LOCUST GROVE ROAD/BILL GARDNER PKWY	3	7-Feb-00	(CR650)	1511040100	401		
322020-	SR 96 FM E CL/JUNCTION CITY TO CR 48 W/BUTLER IN TAYLOR CO	12	2-Apr-01	Superelevation/cross slope (SR96/FLF)	2631009600	96		
322130-	SR 1/US 27 FM S/LUMPKIN NEAR CR 101 TO WIMBERLY MILL BR	11	13-Apr-98	(SR27)	2591000100	1	12.36	12.6
322350-	SR 74 FM JUST SOUTH OF CROSSTOWN RD NW TO SR 54	13	2-May-06	280' stopping sight distance for 35 mph Design Speed in lieu of 345' stopping sight distance for 45 mph Deesign Speed shown for the project.	1131007400	74	13.7	13.7
322420-	SR 3/US 19 FM ANGELICA CK/SUMTER TO SR 271/SCHLEY	11	11-Sep-03	Substd vert. grades greater than 4 % (US19/SR3)	2611000300	3	13.5	14.8
322710-	SR 3/US 19 FM CR 201/COOPER RD TO BUTLER BYPASS & NEW LOC	11	26-Sep-02	Substandard vertical Grade 5% (US19/SR3)	2691000300	3	7.21	7.3

Table 9 continued

322922-	SR 3/US 19 @ POTATO CREEK IN THOMASTON	13	20-Jun-07	Substandard K value for 45 mph speed design	2931000300	3	17.02	17.3
323075-	SR 138 @ SR 155	9	28-Mar-08	Substrandard "K" Value (2 on SR 155 & 2 on SR 138)	1511013800	138	18.94	19.24
331620-	SR 230 @ SOUTH PRONG BIG TUCSAWHATCHEE CRK W/HAWKINSVILLE	9	13-Sep-96	(SR230)	2351023000	230	0.38	0.38
331850-	SR 18 EB MP 14.88-15.92|WB MP 17.14-18.7| EB MP 21.39-22.59	9	28-Jun-96	(SR18)	1691001800	18	17.14	18.7
331850-	SR 18 EB MP 14.88-15.92|WB MP 17.14-18.7| EB MP 21.39-22.59	9	28-Jun-96	(SR18)	1691001800	18	17.14	18.7
331850-	SR 18 EB MP 14.88-15.92|WB MP 17.14-18.7| EB MP 21.39-22.59	9	28-Jun-96	(SR18)	1691001800	18	17.14	18.7
332360-	SR 42/US 23 PASSING LANES @ 2 LOC BT JACKSON & JENKINSBURG	3	13-Jan-04	Substandard shoulder width (SR42)	351004200	42	13.56	13.68
333160-	SR 27 @ BLADEN CREEK 11 MI SW OF LUMPKIN	9	22-Sep-03	One Substd sag vert. curve (meets 1994 not 2001) (SR27)	2591002700	27	0.662	0.889
333185-	SR 85 NBL @ MORNING CREEK 3.5 MI N OF FAYETTEVILLE	9	17-May-05	One substand. Vert. Curve. Improved from 46 mph to 48 mph. Speed Design is 55 mph.	1131008500	85	14.27	14.34
333202-	SR 18/US 27 ALT. @ KENDALL CREEK 2 MI S OF GREENVILLE	9	22-Sep-03	One substd. Sag Vert. Curve (meets 1994 not 2001) (SR18/US27)	1991001800	18	13	13.17
342960-	CR 317/HENRY BRYANT ROAD @ WAHOO CREEK 3.5 MI NW OF NEWNAN	3	26-Mar-99	(CR317)	772031700	317		

Table 9 continued

342970-	JONESBORO RD FM W OF SR 3/US 41/CLAYTON TO I-75/HENRY	12		Received DE for SE transition length of 81' instead of needed 133'. Determined no DE required for SE transition lengths as per p.47 of Mitigation Strategies for DE's 2007 ed. 3/23/2010.	631092000	920		
343345-	SR 153 @ LITTLE MUCKALEE CREEK 3.0 MI E OF JCT SR 45	9	9-Feb-04	One substandard Vert. Curve (SR153)	2491015300	153	4.9	5.03
343355-	SR 137 @ OOCHEE CREEK 2.5 MI E OF JCT SR 41	11	6-Jun-05	Vertical alignment ties into an existing grade of 8.1 % at MP 11.14. Max allowable 7 %.	1971013700	137	11.14	11.14
343365-	SR 137 @ CEDAR CREEK 13.3 MI SW OF BUTLER	11	2-Sep-03	Grade exceeds 2001 AASHTO 7.63 % (SR137)	2691013700	137	0.78	0.88
343365-	SR 137 @ CEDAR CREEK 13.3 MI SW OF BUTLER	9	26-Aug-03	2 substand. VC "K" values meets 94 but not 2001 AASHTO (SR137)	2691013700	137	0.52	0.81
343385-	SR 109 @ ELKINS CREEK 0.5 MI EAST OF MOLENA	9	26-Oct-04	Sag VC designed under 1994 AASHTO.	2311010900	109	3.54	3.73
350710-	CS 877/W MCINTOSH RD/GRIFFIN FM OLD ATLANTA RD TO SR 3/US 41	9	30-Aug-02	One substd. Vert. Curve@ Beg. Proj. (CS877)	2553087705	877		
350820-	HOUSTON RD FM WALDEN/SARDIS CH RDS TO SR 11	3	18-Mar-99	(CR739)	212073900	739		
350820-	HOUSTON RD FM WALDEN/SARDIS CH RDS TO SR 11	3	17-Aug-99	(CR739)	212073900	739		
351120-	BLOOMFIELD RD/LOG CABIN DR FM ROCKY CK RD TO SR 22/EISENHOWE	8	14-Aug-06	Substandard radius length - Bloomfield Rd	211102300	1023		
351150-	CR 79/NORTHSIDE DR FM WESLEYAN DR TO CR 723/FOREST HILL RD	13	16-Feb-01	Substandard SSD 1 curve on CR73 (CR79/CR73)	212007900	79		

Table 9 continued

351170-	SR 14/US 29 LEFT TURN LANE FROM MEADOW WAY DR TO SR 14 SPUR	9	18-Jan-06	Substand Sag Vertical Curve meets 35 mph instead of 45 mph.	2851001400	14	19.2	19.26
351170-	SR 14/US 29 LEFT TURN LANE FROM MEADOW WAY DR TO SR 14 SPUR	9	18-Jan-06	Substand Sag Vertical Curve meets 35 mph instead of 45 mph.	2851001400	14	19.5	19.59
351210-	SR 3/US 19 TURN LANES AT SR 362 IN GRIFFIN	3	18-Mar-03	Substd shoulder width/Horiz. Clr. Under BR. (SR362)	2551000300	3		
363540-	US 19 CORR FM SR 22/US 80 NW TO CR 421/LOG TOWN RD	9	8-Jun-96	(SR22)	2931000300	3		
363557-	SR 3/US 19 FM CR 219 NEAR NCL/BUTLER TO NORTH OF SR 208	11	9-Sep-98	(SR3)	2691000300	3	16.24	20.29
410240-	I-75 FM N CITY LIMITS OF TIFTON TO TURNER COUNTY LINE-PH-1	6	30-Jul-01	Substd horz. Clr. 4 locations (I-75)	2771040100	401		
410240-	I-75 FM N CITY LIMITS OF TIFTON TO TURNER COUNTY LINE-PH-1	6	27-Nov-01	Substd horz. Clr. 4 locations (I-75)	2771040100	401		
410245-	I-75 FM TIFT COUNTY LINE TO SR 32 - PHASE I	6	29-Mar-04	Substd Horiz. Clr. On I-75 at Inaha Rd (CR252) (I-75)	2871040100	401		
410250-	I-75 FM SR 159 NR ASHBURN TO SR 300/CRISP	9	8-Dec-00	(I-75)	2871040100	401	85.7	96.6
410250-	I-75 FM SR 159 NR ASHBURN TO SR 300/CRISP	6	10-May-00	(I-75)	2871040100	401		
410250-	I-75 FM SR 159 NR ASHBURN TO SR 300/CRISP	6	10-May-00	(I-75)	811040100	401		
410500-	I-75 FM NORTH OF SR 133 TO COOK COUNTY LINE - PHASE 1	6	9-Oct-01	Substd horiz. Clr. (SR75)	1851040100	401		

Table 9 continued

410500-	I-75 FM NORTH OF SR 133 TO COOK COUNTY LINE - PHASE 1	3	10-May-05	Substandard Shoulder Width on Val Tech Road (using 4.5' shouldrs instead of 8') for a distance of 550' parralel and next to Ramp B (I-75).	1851040100	401		
410510-	I-75 FM LOWNDES COUNTY LINE TO NORTH OF SR 37 - PHASE 1	6	29-Mar-04	Horiz Clr at two overpasses (I-75)	751040100	401		
410520-	I-75 FM SR 37 TO CR 246/KINARD BRIDGE RD - PHASE I	6	29-Mar-04	Horiz Clr at three overpasses (I-75)	751040100	401		
410530-	I-75 FM CR 246/KINARD BRIDGE RD TO TIFT COUNTY LINE-PHASE I	6	29-Mar-04	Horiz Clr at one overpasse (I-75)	751040100	401		
421980-	SR 49 OVER KINCHAFOONEE CREEK/ ALSO SUMTER CO	12	20-Aug-97	(SR49)	2731004900	49	4.28	4.29
422250-	SR 31/US 441 @ MILL CREEK	8	11-Feb-03	One substd. Horizontal curve/meets 1994 not 2001 (SR31/US441)	691003100	31		
422250-	SR 31/US 441 @ MILL CREEK	4	27-Dec-01	Bridge width/cross slope (SR31/US441)	691003100	31	27.7	28.43
431290-	SR 27 OVER TOBANNEE CREEK NORTH OF GEORGETOWN	11	25-Sep-97	(SR27)			1.45	1.78
431550-	SR 111 @ TIRED CREEK & OVERFLOW SOUTH OF CAIRO	11	5-May-00	(SR111)	1311011100	111	13.58	14.08
431670-	SR 35/W THOMASVILLE BYP /US 319 FM SR 35BU N TO SR 38/US 84	9	22-Aug-02	2 substd. Vertical curves (US319/SR35)	2751003500	35	6.93	9.54
431830-	SR 135 FM SR 31/US 441 EAST TO SR 32 INCLUDING RR SEPARATION	8	18-Dec-09	Design exception allows for existing 40 degree intersection angle to remain at intersection of SR 32/Ward Street and SR 135.	691013500	135	10.67	10.67

Table 9 continued

442550-	SR 188 OVER W. BRANCH BARNETTS CK NE OF CAIRO	8	3-Jan-95	(SR188)	1311018800	188	7.64	8.01
442682-	CR 275 @ PISCOLA CREEK APPROXIMATELY 2.5 MILES SE OF DIXIE	12	4-Aug-98	(CR275)	272027500	275		
442740-	CR 307/OLD GA HWY 3 @ BIG SLOUGH & OVERFLOW IN NORTH CAMILLA	4	11-Jan-05	Bridge Width of 32' instead of 40' on CR307 @ Big Slough and Big Slough Overflow. Historic.	2052030700	307		
471080-	CR 598 OVER BEAR CREEK @ HILLARDS LAKE 5 MILES SW OF DOUGLAS	8	5-Jul-96	(CR598)	692059800	598		
511070-	I-95 FM FLA LINE TO HARRIETTS BLUFF RD/INCL BR @ CROOKED RVR	13	29-Apr-96	(I-95)			3	3
511070-	I-95 FM FLA LINE TO HARRIETTS BLUFF RD/INCL BR @ CROOKED RVR	3	29-Apr-96	(CR90&CR61)				
511075-	I-95 @ ST MARY'S RIVER @ FLA STATE LINE	9	4-Aug-95	(I-95)				
511080-	I-95 FM HARRIETT'S BLUFF ROAD TO SR 25 SPUR/51Y080	9	8-Sep-97	(SR25 SPUR)	391040500	405	2.64	2.64
511100-	I-95 FM N OF CSX RR TO N OF S ALTAMAHA RIVER;EXC SR 99 INT	6		Substandard Outside Shoulder Horizontal Clearances (6.22' & 6.69') at SR 99 Overpass	1271040500	405	14.64	14.64
511110-	I-95 FM JUST N OF ALTAMAHA RIVER BRIDGE TO SR 251	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 7" proposed) on I-95 at SR 251.	1911040500	405	49	49
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 5' - 8" proposed) on I-95 at CR 16.	1911040500	405	51.3	51.3

Table 9 continued

511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 4" proposed) on I-95 at CR 17.	1911040500	405	53.6	53.6
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 2" proposed) on I-95 at CR 21.	1911040500	405	55.6	55.6
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 4" proposed) on I-95 at SR 57/99.	1911040500	405	58.2	58.2
511150-	I-95 FM JERICO RIVER TO US 17	1	21-May-99	(I-95)	291040500	405	85.9	85.9
511180-	I-16 @ I-516 & @ STILES AVE - BRIDGE REPAIRS	7	20-Aug-03	Substd Br. Clearance 3 bridges (1 to 3 inches) (I-16)	511040400	404		
511180-	I-16 @ I-516 & @ STILES AVE - BRIDGE REPAIRS	7	20-Aug-03	Substd Br. Clearance 3 bridges (1 to 3 inches) (I-16)	511040400	404		
521570-	SR 31/US 441 @ ALLIGATOR| BIG HORSE OFLOW| BIG HORSE CKS	4	13-Jun-01	Bridge Width/Cross Slope (SR31/US441)	2711003100	31		
521570-	SR 31/US 441 @ ALLIGATOR| BIG HORSE OFLOW| BIG HORSE CKS	4	13-Jun-01	Bridge Width/Cross Slope (SR31/US441)	2711003100	31		
521705-	SR 21-NEW PARALLEL BRIDGE @ LITTLE EBENEZER CREEK	4	11-Aug-95	(SR21)				
521780-	SR 26/GARDEN CITY FM CR 704 TO SR 27/US 17|INCL CLVT EXT	12	19-Sep-96	(SR26)				
521780-	SR 26/GARDEN CITY FM CR 704 TO SR 27/US 17|INCL CLVT EXT	8	19-Sep-96	(SR26)				
522000-	SR 73/US 301 FM N CL/GLENNVILLE TO EVANS CO LINE	9	1-Jul-97	(SR73)	2671007300	73	3.68	4.51

Table 9 continued

522470-	SR 26/US 80 EB MP 7.1-8.2| WB MP 8.1-9.3	9	8-Sep-97	(SR26)	311002600	26	8.21	8.4
522520-	SR 15 BTWN HIGGSTON & TARRYTOWN/ NB MP 5.0-6.4;SB 8.7-9.7	9	4-Nov-98	(SR15/29)	2091001500	15	6.11	9.81
522520-	SR 15 BTWN HIGGSTON & TARRYTOWN/ NB MP 5.0-6.4;SB 8.7-9.7	9	10-Oct-01	4 vert curves "K" not meeting 3R (SR15/29)	2091001500	15	6.08	9.71
522520-	SR 15 BTWN HIGGSTON & TARRYTOWN/ NB MP 5.0-6.4;SB 8.7-9.7	9	4-Nov-98	(SR15/29)	2091001500	15	6.11	9.81
522520-	SR 15 BTWN HIGGSTON & TARRYTOWN/ NB MP 5.0-6.4;SB 8.7-9.7	9	10-Oct-01	4 vert curves "K" not meeting 3R (SR15/29)	2091001500	15	6.08	9.71
532690-	SR 99 FM SR 520 TO SR 32	12	22-Feb-96	(SR99)			6.64	6.75
550570-	MIDDLEGROUND/MONTGOMERY CROSS RD FM SR 204/ABERCORN TO SR204	8	24-Dec-03	Horizontal alignment/Super-elevation (Middleground Rd)	513114407	1144		
610755-	I-75 @ SR 225 N OF CALHOUN (INCLUDING I-75 BRIDGE)	3	15-Jun-99	(I-75)	1291040100	401	1.33	1.37
611310-	I-59 @ 3 LOC|I-24 @ 1|I-75 @ 4/WHITFIELD/CATOOSA--611310|X|Z	3	23-May-00	(SR146)	831040600	406	4.38	4.4
620399-	SR 52 @ CSX RR IN CHATSWORTH	9	10-Sep-03	One substd Vert Curve "K" and one taper length (SR52)	2131005200	52	7.44	7.52
620590-	SR 1/US 27 IN ROME FM 5TH AVE TO JOHN DAVENPORT DR	9	21-Jan-04	1 substd VC "K" Value (SR1/US27)	1151000100	1	14.14	14.2
621070-	SR 1/US 27 FM NEAR SR 156/FLOYD TO CR 329/CHATTOOGA-62107X	1	15-Aug-96	(CR'S)	1151000100	1		
621580-	SR 120 FM W OF BUCHANAN BYP TO LAKE OLYMPIA	9	7-Jan-04	VC on three side roads. Horiz @ one side road (SR120)	1431012000	120		

Table 9 continued

621580-	SR 120 FM W OF BUCHANAN BYP TO LAKE OLYMPIA	8	4-May-04	Runoff length between back to back horiz. Curves (SR120)	1431012000	120	10.65	10.79
621590-	SR 53 - WB PASSING LNS EAST OF TATE MP 20.4-21.3 & 22.6-24.1	9	5-Jul-99	(SR53)	2271005300	53	23	24
621590-	SR 53 - WB PASSING LNS EAST OF TATE MP 20.4-21.3 & 22.6-24.1	8	5-Jul-99	(CR273)	2271005300	53		
621660-	WEST ROME BYPASS FM 0.34 MI S OF COOSA RIVER TO SR 20	13		Returned to T Hodges for additional information 5/12;	1151000000	0		
630673-	CANTON HWY FM CR 351/PALM RD TO N/SIXES RD[INC RR BR]-63Y673	1	20-Mar-97	(CR)	571075400	754		
631100-	SR 282/ELLIJAY FM WEST OF SR 5 ALT EAST TO SR 2 & BRIDGE	3	31-Dec-96	(SR282)	1231028200	282	11.8	11.8
631430-	SR 2/SR 52 @ MOUNTAINTOWN CREEK 6.7 MI NW OF ELLIJAY	9	26-Jun-96	(SR2/SR52)	1231000200	2	6.26	6.5
631430-	SR 2/SR 52 @ MOUNTAINTOWN CREEK 6.7 MI NW OF ELLIJAY	3	26-Jun-96	(SR2/SR52)	1231000200	2	6.25	6.5
631580-	SR 282 BRIDGE REPLACEMENT OVER TAILS CREEK WEST OF ELLIJAY	11	28-Jan-00	(SR282)	1231028200	282	3.8	4.2
631580-	SR 282 BRIDGE REPLACEMENT OVER TAILS CREEK WEST OF ELLIJAY	9	28-Jan-00	(SR282)	1231028200	282	3.8	4.2
631630-	SR 61 @ RIDGE ROAD/MULBERRY ROCK RD SOUTH OF DALLAS	13	25-Jul-07	Substandard sight distance (370')	2231006100	61	1.75	2.3

Table 9 continued

631630-	SR 61 @ RIDGE ROAD/MULBERRY ROCK RD SOUTH OF DALLAS	9	25-Jul-07	Substandard "K" values (4 locations - Sta. 11+56.88, 15+73.72, 20+96.75 & 27+99.91)	2231006100	61	1.75	2.3
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100		
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100		
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100		
642160-	SR 60 @ COOPERS CREEK - BRIDGE REPLACEMENT	9	29-Aug-02	Two substandard vertical curve "K" (SR60)	1111006000	60	1.982	2.257
642160-	SR 60 @ COOPERS CREEK - BRIDGE REPLACEMENT	8	6-Mar-02	Substd horizontal curve (SR60)	1111006000	60	2.02	2.1
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	31-Jul-00	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	27-Feb-04	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	31-Jul-00	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	27-Feb-04	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
650460-	SR 101 OVER ETOWAH RIVER IN ROME	9	31-May-00	(SR101)	1151010100	101	10.98	11.52

Table 9 continued

650470-	TOWNE LAKE PARKWAY FM EAGLE DR/TOWNE LAKE PKWY TO I-575	11	14-Jun-96	(CR)				
662350-	SR 293/ROME FM KINGSTON AVE E TO EAST ROME BYP	1	26-Sep-95	(CR'S)			6	7
662400-	SR 1/US 27 FM CEDARTOWN BYP TO CR 633/BOOZE RD/FLOYD CO	1	21-Sep-95	(SR1)	2331000100	1	11.09	14.8
671040-	CR 394/HICKORY LEVEL-SAND HILL RD @ HOMINY CK SW/VILLA RICA	3	6-Feb-98	(CR394)	452039400	394		
671951-	CR 107/HOWELL BRIDGE RD @ SHARP MTN CREEK SW OF BALL GROUND	9	9-Mar-09	2 Substandard Vertical Curves at Tie-Ins; Returned for more infor 2/25; Resubmitted w/ mitigation 3/05	572010700	107		
712420-	I-75 FM US 41/OLD DIXIE HWY TO I-285/INCL BR & FNTGE RDS	12	21-Jan-97	(I-75)	631040100	401	238.22	238.4
712630-	I-75 FM MEADOW BROOK DR TO MORROW CITY LIMITS &SR 54 INTERCH	3		Substandard inside shoulder width (2'-9") for Type 7-C side barrier; Denied by FHWA 6/21/2006	631005400	54	232.4	232.5
712870-	I-20 @ LITHONIA INDUSTRIAL BLVD	13	28-Mar-03	Stopping sight distance (Evans Mill Road)	891040200	402		
712870-	I-20 @ LITHONIA INDUSTRIAL BLVD	3	20-May-03	Inside shoulder width less than 10' (I-20)	891040200	402		
713240-	I-285 @ PACES FERRY ROAD - INTERCHANGE RECST	11	12-Jun-00	(PACES FY RD)	671040700	407		
713240-	I-285 @ PACES FERRY ROAD - INTERCHANGE RECST	9	12-Jun-00	(PACES FY RD)	671040700	407		

Table 9 continued

713290-	I-285 @ SR 155/FLAT SHOALS ROAD	3	20-Feb-11	DE Request for substandard shoulder width and lateral offset to obstruction along Ramp B @ I-285/Panthersville Road overpass.	891040700	407	48.3	48.35
713371-	I-285 ATMS/SURVEIL FM I-85/UNION CITY NORTH TO I-20 WEST	2		10' lanes on Ramps at the following locations: I-285 NB & SB at Washington Road, I-285 NB & SBat Camp Creek Road, I-285 NB & SB at MLK, I-285 NB & SB at Cascade Road, I-285 NB at SR166.	1211040700	407		
713372-	I-285 ATMS/SURVEIL FM I-85/UNION CITY-FULTN E TO I-75/CLAYTN	2		10' lanes on Ramps at the following locations: I-285 WB at NB Riverdale Road, I-285 WB at SB Riverdale Road, I-285 EB at Riverdale Road.	631040700	407		
713405-	I-285 ATMS RAMP METERS FM NORTHSIDE DR/FULTON TO I-85/DEKALB	2		Using 10' lanes on Ramps at the following locations: North Peachtree Road EB, Peachtree Industrial Blvd. EB, Chamblee-Dunwoody Road WB, and Ashford Dunwoody Road WB.	891040700	407		
713405-	I-285 ATMS RAMP METERS FM NORTHSIDE DR/FULTON TO I-85/DEKALB	2		Using 10' lanes on Ramps at the following locations: New Northside Drive EB and Glenridge Drive WB	1211040700	407		
713470-	I-85 RESURFACING-MARKING FM I-75 TO PIEDMONT RD FOR HOV	3	13-Mar-95	(I-85)			84.9	95.8
713470-	I-85 RESURFACING-MARKING FM I-75 TO PIEDMONT RD FOR HOV	2	13-Mar-95	(I-85)			84.9	95.8

Table 9 continued

713472-	I-85 RESURFACING-MARKING FM PIEDMONT RD TO I-285 FOR HOV	3	22-Jun-95	(I-85)			85	95
713472-	I-85 RESURFACING-MARKING FM PIEDMONT RD TO I-285 FOR HOV	2	22-Jun-95	(I-85)			85	95
713474-	I-75 RESURFACING-MARKING FM I-285 S. TO EDGEWOOD FOR HOV	3	13-Mar-95	(Design exception in Fulton - I-75)	631040100	401	38.5	58.85
713474-	I-75 RESURFACING-MARKING FM I-285 S. TO EDGEWOOD FOR HOV	2	13-Mar-95	(Design exception in Fulton - I-75)	631040100	401	38.5	58.9
713760-	I-85 FM CHAMBLEE-TUCKER RD TO SR 316/GWINNETT-FOR HOV/71376X	13	10-Aug-98	(I-85)	891040300	403	5.9	8.75
713760-	I-85 FM CHAMBLEE-TUCKER RD TO SR 316/GWINNETT-FOR HOV/71376X	3	10-Aug-98	(I-85)	891040300	403	5.9	8.75
713760-	I-85 FM CHAMBLEE-TUCKER RD TO SR 316/GWINNETT-FOR HOV/71376X	2	10-Aug-98	(I-85)	891040300	403	5.9	8.75
714090-	I-575 ATMS/COMM/SURVEILLANCE FM I-75/COBB TO SR 92/CHEROKEE	2		10' lanes on Ramps at the following locations: Barrett Pkwy NB and Chastain Road SB.	671000500	5		
714090-	I-575 ATMS/COMM/SURVEILLANCE FM I-75/COBB TO SR 92/CHEROKEE	2		10' lanes on Ramps at the following locations: SR92 SB	571000500	5		
714190-	17TH ST FM ATLANTIC STA. TO W.PEACHTREE & SR I-75/85 RMPS	9	10-Oct-01	2 vertical curves (17th St)	1211040100	401		
721310-	SR 120/ROSWELL RD FM SR 120 ALT TO BRIDGEGATE DR - GRTA	11	21-Oct-09	7.3% Vetrical Grade	671012000	120	13.67	13.88

Table 9 continued

721310-	SR 120/ROSWELL RD FM SR 120 ALT TO BRIDGEGATE DR - GRTA	9	21-Oct-09	K Value =50 (79 req'd)	671012000	120	13.67	13.81
721470-	SR 5 N&SB FM S/SWEETWATER RD TO S/DOG RIVER BRIDGE	9	20-Jan-95	(SR5)				
721470-	SR 5 N&SB FM S/SWEETWATER RD TO S/DOG RIVER BRIDGE	8	20-Jan-95	(SR5)				
721470-	SR 5 N&SB FM S/SWEETWATER RD TO S/DOG RIVER BRIDGE	3	20-Jan-95	(SR5)				
721510-	SR 120/ALPHARETTA FM SR 9/MAIN ST EASTERLY TO SR 400	9	15-Dec-95	(SR120)			8.2	8.25
721530-	SR 124 FM ROCKBRIDGE RD TO CENTERVILLE-ROSEBUD RD/GWINET*GF	9	14-Nov-97	(S2287)	891012400	124		
721530-	SR 124 FM ROCKBRIDGE RD TO CENTERVILLE-ROSEBUD RD/GWINET*GF	9	11-Jun-97	(CR)	891012400	124		
721530-	SR 124 FM ROCKBRIDGE RD TO CENTERVILLE-ROSEBUD RD/GWINET*GF	8	11-Jun-97	(CR)	891012400	124		
721580-	SR 20/138 FROM RELOCATED SR 138 TO I-20	8	7-Jul-97	(CR173)	2471013800	138		
721940-	SR 410 ATMS/COMM/SURVEIL FM LAWRENCEVILLE HWY TO E PARK PL	8	7-Dec-06	Substandard Acceleration Distance (805')	891041000	410		
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	13	11-Jul-05	Sight meets approx. 55 mph.	1211040000	400	18.21	18.43

Table 9 continued

722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	13	11-Jul-05	Sight meets approx. 62 mph.	1211040000	400	17.73	17.96
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	3	4-Dec-06	6'-10" Inside Shoulder width; To FHWA 11/17/2006;	1171040000	400	13.75	1.48
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	3	11-Jul-05	Using 6' -10" shoulder (instead of 10') on SR 400 NB from Holcomb Bridge Road to Winward Parkway.	1211040000	400	14.46	20.11
730753-	SOUTH FULTON PKWY FM COCHRAN MILL RD TO SR 154 - GRTA	13	10-Feb-98	(CR)	1212204300	2043		
730753-	SOUTH FULTON PKWY FM COCHRAN MILL RD TO SR 154 - GRTA	4	19-Mar-99	(SO. FUL. PWY)	1212204300	2043		
730756-	NEW WOOTEN ROAD FM CAPPS FERRY RD TO COCHRAN MILL RD *GF	3	15-Apr-98	6' WDT 300' @ BR APPROACH (CR)	1212204300	2043		
731047-	SR 138/SR 20 FROM NORTH OF I-20 TO SIGMAN ROAD	8	1-Apr-98	(CS)	2471002000	20		
731520-	SR 3/US 19 @ CEN OF GA RAILROAD .35 MI S OF JCT I-285	8	17-Nov-03	Old Dixie Hwy (side raod) at SR3 Horiz. Alignment (Old Dixie Hwy at SR3/US19)	631000300	3		
742510-	OLD COVINGTON HWY @ ROCKDALE INDUST. BLVD & FARMER RD	8	17-May-95	(CR)				
751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	11	30-Nov-07	Excessive vertical grades (8.25% & 9.68%)	671094700	947		

Table 9 continued

751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	8	16-Apr-08	Design Exception for Sub-Standard Skew Angle of Riverside Drive to Johnson Ferry Road (55^ 43' 11"). This was included with 2 other Design Exception Requests and 3 other Design Variance Requests. Sent to the Chief Engineer on 4/10/08.	671094700	947		
751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	8	29-Apr-08	Design Exception for a Sub-Standard radius on Riverside Drive of 69' (420' required for 4% SE). This was included with 2 other Design Exception requests and 3 other Design Variance requests. Submitted to the Chief Engineer on 4/10/08.	671094700	947		
751310-	ABERNATHY RD FM JOHNSON FERRY RD TO ROSWELL RD - GRTA	8		Design Exception for a Sub-Standard radius on Riverside Drive of 69' (420' required for 4% SE). This was included with 2 other Design Exception requests and 3 other Design Variance requests. Submitted to the Chief Engineer on 4/10/08.	1211094700	947		
751320-	CR 5189/ROCKBRIDGE RD @ SNAPFINGER CREEK	9	26-Jun-03	One Substd Sag VC meets 1994 not 2001 AASHTO (Rockbridge Rd)	891085700	857		
751940-	CR 5109/STEPHENSON RD @ CROOKED CRK	9	13-Jan-95	(CR5109)	892510900	5109		

Table 9 continued

752015-	CS 1868/COURTLAND STREET @ CSX RR	12		DE Request to retain exist SE along length of bridge due to potential impacts to buildings on Courtland Street in Atlanta. Determined DE not required due to low speed, urban condition. See page 471of 2004 Green Book. 1/7/2011	1213186803	1868		
752020-	PEACHTREE ST @ GEORGIA RR & MARTA @ UNDERGROUND ATLANTA	2	10-Apr-03	Substd lane width/substd horiz align. (Peachtree St.)	1213066103	661		
752030-	INTERNATIONAL BLVD @ CSX & NORFOLK-SOUTHERN RR @ WCC	9	14-Jun-01	Substd Vertical Curves (Intnationl Blvd)	1213200103	2001		
752086-	SR 999/CS 3586/SPRING STREET OVER CSX RAILROAD	13	22-Sep-10	DE request for SSD at horizontal curve on Spring Street viaduct near Marietta Street in Atlanta.	1213358601	3586		
752086-	SR 999/CS 3586/SPRING STREET OVER CSX RAILROAD	8	22-Sep-10	DE request for substandard horizontal curve on Spring Street viaduct bridge near Marietta Street in Atlanta.	1213358601	3586		
752100-	CR 5151/E PONCE DE LEON FM W OF IDLEWOOD TO E/SAGEWOOD CIR E	12	25-Mar-97	(M9012)	892515100	5151		
752130-	AUBURN AVE PEDESTRIAN SYSTEM FM BELL ST TO HILLIARD ST	6	3-Jan-95	(CS)				
752140-	P'TREE ST PEDESTRIAN SYS FM MEMORIAL DR TO PINE STREET	6	27-Jan-95	(CS)				
752295-	KENNEDY INTCH-RIVERWOOD PKWY FM US 41 TO CUMBERLAND CIR	9	21-Sep-01	2 substd. Vertical curves (Cumberland B.)	672514200	5142		

Table 9 continued

752560-	SR 999/CS 3586/SPRING STREET @ SOU RR- CSX RR REPLACEMENT	13		See 752086	1213358603	3586		
752560-	SR 999/CS 3586/SPRING STREET @ SOU RR- CSX RR REPLACEMENT	8		See 752086	1213358603	3586		
752570-	CR 1349/FAIRBURN ROAD @ CSX RAILROAD NORTH OF CASCADE RD	11	9-Oct-98	(CR1349)	1212134900	1349		
752570-	CR 1349/FAIRBURN ROAD @ CSX RAILROAD NORTH OF CASCADE RD	9	9-Oct-98	(CR1349)	1212134900	1349		
752870-	SR 154/MEMORIAL DRIVE AT MORELAND AVE DEKALB/FULTON CO LN	13	5-Oct-00	SUBSTD SSD FOR 5 VERT CURVES (SR154/SR42)	1211015400	154		
752870-	SR 154/MEMORIAL DRIVE AT MORELAND AVE DEKALB/FULTON CO LN	12	5-Oct-00	SUBSTD SE RATE (SR154)	1211015400	154		
752940-	CR 5194/FLAT SHOALS ROAD @ DOLITTLE CREEK JUST SOUTH OF I-20	9	4-Apr-03	Substd. Vertical Curve (Battlecrest Dr)	892519400	5194		
752960-	CR 186/HEMBREE ROAD @ FOE KILLER CREEK 2 MI SW OF ALPHARETTA	9	23-Oct-06	Sent down for approval on 10/17/06 --- Vertical curve does not meet 35 mph Speed Design	1212018600	186	2.3	2.4
753025-	SR 6BU/MARIETTA ST FM NEW MACLAND RD TO BROWNSVILLE RD/BIKE	6	2-May-03	Substd horizontal Clearance/Clear zone (Marietta St.)	06710006B U	6		
753050-	CR 4176/CASCADE RD FM DANFORTH RD TO ATLANTA CTY LIM;ADD MED	12	11-Dec-01	Substd SE rates (Cascade Rd)	1212417600	4176		
753100-	CR 810/KINGS HIGHWAY @ CR 173/CENTRAL CHURCH RD	8	6-Jul-07	Substandard radius (660') for 45 mph SD	972081000	810		

Table 9 continued

753110-	CR 812/CHAPEL HILL RD @ CR 145/WEST CHAPEL HILL RD	8	1-Aug-02	Substd Horiz Align/SE on W. Chapel Hill Rd.	972081200	812		
753170-	SR 155/CANDLER ROAD ENHANCEMENTS @ GLENWOOD RD - PHASE 1	8	11-May-05	Substand Shifting tapers on Glenwood Acenure (both directions).	891015500	155	3.45	3.63
762380-	SR 400/I-85 CONNECTOR RAMPS	13	20-Feb-11	DE Request for substandard SSD on existing ramp bridge from I-85 SB to SR 13/Buford Hwy SB (adjacent to proposed I-85 SB to GA 400 NB ramp.	1211040000	400		
762624-	PEACHTREE HILLS FM PEACHTREE TO LINDBERGH & SIDEWALKS	9	15-Apr-02	2 substd vertical curves (P'tree Hills Ave)	1213039003	390	0.208	0.297
771273-	CR 629/JOHNSON ROAD @ PEEKS CREEK 1 MI E OF PALMETTO	9	22-Sep-03	Sag vertical curve meets speed design of 35 mph but not posted speed of 45 mph (CR629/Johnson Road)	1212062900	629		
M000355	SR 83 @ CHURCH STREET IN MONTICELLO - DRAINAGE IMPROVEMENTS	6		DE Request for lateral offset to obstruction 1' from EOP to RR retaining wall (25mph) Determined design exception not req'd due to existing condition, low speed, no accident history,outside of project scope. See 5/27/2010 e-mail.	1591008300	83	13.46	13.46
M001994	I-75 @ 3 LOCS IN HENRY & 1 LOC IN SPALDING - BRIDGE JACKING	9	22-Dec-04	Design exception to retain a substd. VC on CR115 (Jenkinsburg Road) on the Bridge over I-75 (I-75 MP 0.87+/-)	2551040100	401	0.87	0.87
M001994	I-75 @ 3 LOCS IN HENRY & 1 LOC IN SPALDING - BRIDGE JACKING	9	22-Dec-04	Design exception to retain a substd. VC on CR650 (Locust Grove Road) on the Bridge over I-75 (I-75 MP 1.13) (County Road MP 9.17).	1511040100	401	1.13	1.13

Table 9 continued

M002434	I-85 FROM SR 34 TO FULTON COUNTY LINE	3	26-Mar-10	Exception request for I-85 inside shoulder width of 7' - 9". Request recalled by A. Casey on 3-2-10. Revised request received on 3-2-10. 8'-3" Inside shoulder width approved 3-26-2010	771040300	403	47	61
M002434	I-85 FROM SR 34 TO FULTON COUNTY LINE	2	26-Mar-10	11'-0" lane 1, 11'-6" lane 2 in conjunction with 8'-3" inside shoulder width	771040300	403	47	61
M003235	I-20 FROM SR 12/SR 124/TURNER HILL ROAD TO SR 20/SR 138	3	16-Jun-07	Substandard Median Shoulder	891040200	402	16.38	4.99
M003235	I-20 FROM SR 12/SR 124/TURNER HILL ROAD TO SR 20/SR 138	3	16-Jun-07	Substandard Outside Shoulder	891040200	402	3.34	3.57
M003243	I-75 FM CRISP CO LINE TO CR 323/PINEHURST-HAWKINSVILLE RD	3	10-Apr-08	Substandard outside shoulder (10') at Penahatchee Creek; To FHWA 3/27/08;	931040100	401	108.19	109.2
M003480	I-85 FROM COWETA COUNTY LINE TO SR 74	3	26-Mar-10	Exception for I-85 inside shoulder width of 7' - 9". 8'-3" inside shoulder width approved 3/26/2010	1211040300	403	47	61
M003480	I-85 FROM COWETA COUNTY LINE TO SR 74	2	26-Mar-10	11'-0" lane 1, 11'-6" lane 2 in conjunction with 8'-3" inside shoulder width	1211040300	403	47	61

APPENDIX B: SAMPLE DESIGN EXCEPTIONS DATA

Table 10: Design Exceptions from 2003 to 2008 (GDOT-assigned MPs)

PROJ_CNTY _PROJ_EXT_ PROJ_ID	DS	EXCEPTION _TYPE_CD	APPROVED _DT	COMNT	RC_LINK	MPOINT _ROUTE	MPOINT _BEG	MPOINT _END
0000266	CR 1661/MAYFIELD ROAD @ CR 27/PROVIDENCE ROAD	8	8-Dec-04	Horiz. Curve on Mayfield Road @ Providence Road.	1212166100	1661	1.56	1.62
0000418	SR 15 FROM SR 242 TO NEWMAN ST IN SANDERSVILLE	8	7-Jul-06	Substandard intersecting angle (21 degrees);	3031001500	15	14.34	14.34
0000846	CR 325/FH 12/HAMMOND GAP ROAD @ RUFF CREEK NW OF SUBLIGNA	8	28-Oct-03	One substd horiz curve (CR325)	552032500	325	0.32	0.32
0001298	I-75/85 ATLANTIC STATION:14TH ST BR; RAMP; WILLIAMS ST RELOC	3	29-Jun-06	Jan Hilliard hand carried it down to the Chief Engineer's Office and was to carry it over to FHWA also.	1211000900	9	10.39	10.43
0001364	SR 56/NAIL BRIDGE @ OHOOPEE RIVER 2 MILES W OF REIDSVILLE	13	13-Mar-08	Substandard stopping sight distance - 3 (2 driveways, 1 intersection)	2671005600	56	2.6	3.36
0001558	SR 520 FM W OF BRANTLEY CO LINE TO CR 21/EMANUEL CHURCH RD	8	29-Jan-07	Substandard Intersection Angle - CR 12	251052000	520	27.03	11.25
0002041	SR 104 @ CR 16/HALALI ROAD IN COLUMBIA COUNTY	9	14-Mar-07	Substandard sag vertical (37mph in 45 DS)	731010400	104	6.96	7.03

Table 10 continued

0003085	CR 140/WHITESVILLE ROAD @ STANDING BOY CREEK TRIB. SOUTH	8	14-Jun-04	One substandard horizontal curve at the begin project (CR140/Whitesville Rd)	1452014000	140	1.89	1.94
0003086	CR 140/WHITESVILLE ROAD @ STANDING BOY CREEK SO OF SR 315	8	14-Jun-04	One substandard horizontal curve at the end project (CR140/Whitesville Rd)	1452014000	140	2.93	2.97
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	11.78	11.86
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	11.99	12.03
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	12.15	12.21
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	12.98	13.02
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.27	13.29
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.3	13.38
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.59	13.63

Table 10 continued

0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	9	4-Mar-05	Substandard Vertical Curve.	1211000300	3	13.67	13.73
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	8	4-Mar-05	Substandard radius for Horizontal Curve on Norfleet Road at the intersection of Northside Drive. Norfleet Road Intersects Northside Drive at MP 12.4 (Northside Drive Milepost). No MP provided for Norfleet Road.	1211000300	3	12.4	12.4
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	8	4-Mar-05	Substandard radius for Horizontal Curve on Peachtree Battle Ave at the intersection of Northside Drive. P'tree Battle Ave Intersects Northside Drive at MP 13.1 (Northside Drive Milepost). No MP provided for P'tree Battle Ave.	1211000300	3	13.1	13.1
0004166	SR 3/NORTHSIDE DRIVE @ CS 53/COLLIER RD;CS364; 38; 6; 135	4	4-Mar-05	Substandard Bridge Width on Northside Drive @ Peachtree Creek.	1211000300	3	12.8	12.8
0006365	SR 20 @ SR 212	3	2-May-08	Design Exception for Sub-Standard shoulder width on S.R. 20/S.R. 212 south of the Brown Bridge Road intersection. Called George Brewer on 4/10/08 to rewrite the letter to delete "Clear Zone" DE Request.; Resubmit 04/29/2008	2171002000	20	0.3	0.6
0006952	SIMPSON STREET/JONES AVE FM NORTHSIDE DR TO LUCKIE ST- GRTA	9	3-Sep-04	Substd VC on Ivan Allen Blvd @ Marietta Street.	1213240903	2409	2.7	2.7
0007240	I-985/US 23 @ SR 11/US 129	8	24-Apr-07	Substandard curve radii and length; To FHWA 4/02/2007;	1391041900	419	7.85	8.27

Table 10 continued

0007493	SR 70/SR 154 @ SR 92/CAMPBELLTON-FAIRBURN ROAD	13	10-Oct-06	Substandard K value SR 70; Substandard stopping sight distance(498)	1211007000	70	14.4	14.68
0008234	I-85 NB FROM I-985 TO SR 20	13	18-Dec-06	Substandard Stopping Sight Distance for 70 mph (696'); To FHWA 10/27;	1351040300	403	15.92	16.11
0008234	I-85 NB FROM I-985 TO SR 20	13	18-Dec-06	Substandard Stopping Sight Distance for 70 mph (696'); To FHWA 10/27	1351040300	403	16.26	16.49
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shoulder Width on SR 316 from I-85 to Herrington Road 5' 10" inside shoulders (3' - 5" shoulders at Boggs Road and Breckinridge Boulevard).	1351040300	403	0.7	0.9
122320-	SR 15/US 441 FM N OF TALLULAH FALLS TO S CL OF CLAYTON	9	8-Mar-04	MP 1.89, 1.96, 1.92, 3.42, 7.95, 7.96, 8.73, 8.77, 9.45 (meets 1994 ASSHTO not 2001) (SR15/US441)	2411001500	15	1.89	9.45
231220-	SR 142 FM SOUTH OF SR 12/US 278 TO CR 72 IN COVINGTON	12	8-Aug-07	Substandard superelevation (1.0%)	2171014200	142	8.4	11.56
232240-	SR 22/SR 24 @ CR 472/LAKE LAUREL RD EAST OF MILLEDGEVILLE	8	13-Aug-03	Reverse curves SE Rate and transition (SR22)	91002200	22	13.41	13.83
232260-	SR 22 @ CS 558/TATTNALL STREET IN WEST MILLEDGEVILLE	7	2-May-06	14'-6" vertical clearance on SR 22 over CS 558/Tatnall Street	91002200	22	10.05	10.05
232260-	SR 22 @ CS 558/TATTNALL STREET IN WEST MILLEDGEVILLE	9	12-Mar-07	Substandard K value (8.90) for 35 mph on Tattnall Street	91002200	22	10.05	10.05
232315-	SR 77 @ GOOSEPOND CREEK 14.5 MI NE OF LEXINGTON	9	10-Sep-03	One Substd. Sag Vert. Curve meets 1994 not 2001 AASHTO (SR77)	2211007700	77	31.76	31.98

Table 10 continued

245370-	SR 22 @ LONG CREEK 3.5 MI S OF LEXINGTON	9	19-Aug-03	One substandard vertical curve (meets 94 but not 2001) (SR22)	2211002200	22	11.3	11.52
245371-	SR 22 @ BIG CLOUDS CREEK 3.8 MI E OF SMITHSONIA	9	10-Sep-03	One Substd. Sag Vert. Curve meets 1994 not 2001 AASHTO (SR22)	2211002200	22	24.34	24.56
311630-	I-185 INTERCHANGE @ SR 1/SR 520	8	22-Jun-06	Substandard horizontal curve radius (340') on ramp from I-85 SB to US 27/SR 1 WB	2151041100	411	0	0.4
322350-	SR 74 FM JUST SOUTH OF CROSSTOWN RD NW TO SR 54	13	2-May-06	280' stopping sight distance for 35 mph Design Speed in lieu of 345' stopping sight distance for 45 mph Deesign Speed shown for the project.	1131007400	74	13.7	13.7
322420-	SR 3/US 19 FM ANGELICA CK/SUMTER TO SR 271/SCHLEY	11	11-Sep-03	Substd vert. grades greater than 4 % (US19/SR3)	2611000300	3	13.5	14.8
322922-	SR 3/US 19 @ POTATO CREEK IN THOMASTON	13	20-Jun-07	Substandard K value for 45 mph speed design	2931000300	3	17.02	17.3
323075-	SR 138 @ SR 155	9	28-Mar-08	Substrandard "K" Value (2 on SR 155 & 2 on SR 138)	1511013800	**155** [1]	18.94	19.24
332360-	SR 42/US 23 PASSING LANES @ 2 LOC BT JACKSON & JENKINSBURG	3	13-Jan-04	Substandard shoulder width (SR42)	351004200	42	13.56	13.68
333160-	SR 27 @ BLADEN CREEK 11 MI SW OF LUMPKIN	9	22-Sep-03	One Substd sag vert. curve (meets 1994 not 2001) (SR27)	2591002700	27	0.662	0.889
333185-	SR 85 NBL @ MORNING CREEK 3.5 MI N OF FAYETTEVILLE	9	17-May-05	One substand. Vert. Curve. Improved from 46 mph to 48 mph. Speed Design is 55 mph.	1131008500	85	14.27	14.34
333202-	SR 18/US 27 ALT. @ KENDALL CREEK 2 MI S OF GREENVILLE	9	22-Sep-03	One substd. Sag Vert. Curve (meets 1994 not 2001) (SR18/US27)	1991001800	18	13	13.17

Table 10 continued

343345-	SR 153 @ LITTLE MUCKALEE CREEK 3.0 MI E OF JCT SR 45	9	9-Feb-04	One substandard Vert. Curve (SR153)	2491015300	153	4.9	5.03
343355-	SR 137 @ OOCHEE CREEK 2.5 MI E OF JCT SR 41	11	6-Jun-05	Vertical alignment ties into an existing grade of 8.1 % at MP 11.14. Max allowable 7 %.	1971013700	137	11.14	11.14
343365-	SR 137 @ CEDAR CREEK 13.3 MI SW OF BUTLER	11	2-Sep-03	Grade exceeds 2001 AASHTO 7.63 % (SR137)	2691013700	137	0.78	0.88
343365-	SR 137 @ CEDAR CREEK 13.3 MI SW OF BUTLER	9	26-Aug-03	2 substand. VC "K" values meets 94 but not 2001 AASHTO (SR137)	2691013700	137	0.52	0.81
343385-	SR 109 @ ELKINS CREEK 0.5 MI EAST OF MOLENA	9	26-Oct-04	Sag VC designed under 1994 AASHTO.	2311010900	109	3.54	3.73
351170-	SR 14/US 29 LEFT TURN LANE FROM MEADOW WAY DR TO SR 14 SPUR	9	18-Jan-06	Substand Sag Vertical Curve meets 35 mph instead of 45 mph.	2851001400	14	19.2	19.26
351170-	SR 14/US 29 LEFT TURN LANE FROM MEADOW WAY DR TO SR 14 SPUR	9	18-Jan-06	Substand Sag Vertical Curve meets 35 mph instead of 45 mph.	2851001400	14	19.5	19.59
620399-	SR 52 @ CSX RR IN CHATSWORTH	9	10-Sep-03	One substd Vert Curve "K" and one taper length (SR52)	2131005200	52	7.44	7.52
620590-	SR 1/US 27 IN ROME FM 5TH AVE TO JOHN DAVENPORT DR	9	21-Jan-04	1 substd VC "K" Value (SR1/US27)	1151000100	1	14.14	14.2
621580-	SR 120 FM W OF BUCHANAN BYP TO LAKE OLYMPIA	8	4-May-04	Runoff length between back to back horiz. Curves (SR120)	1431012000	120	10.65	10.79
621580-	SR 120 FM W OF BUCHANAN BYP TO LAKE OLYMPIA	9	7-Jan-04	VC on three side roads. Horiz @ one side road (SR120)	1431012000	120	10.65	10.79

Table 10 continued

631630-	SR 61 @ RIDGE ROAD/MULBERRY ROCK RD SOUTH OF DALLAS	13	25-Jul-07	Substandard sight distance (370')	2231006100	61	1.75	2.3
631630-	SR 61 @ RIDGE ROAD/MULBERRY ROCK RD SOUTH OF DALLAS	9	25-Jul-07	Substandard "K" values (4 locations - Sta. 11+56.88, 15+73.72, 20+96.75 & 27+99.91)	2231006100	61	1.75	2.3
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	27-Feb-04	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
642165-	SR 60 @ SKEENAH CREEK & CHAPEL BRANCH; INC BIKE LN	8	27-Feb-04	HORIZONTAL AND VERTICAL ALIGNMENT (SR 60)	1111006000	60	5.36	13.32
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	3	4-Dec-06	6'-10" Inside Shoulder width; To FHWA 11/17/2006;	1171040000	400	13.75	1.48
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	13	11-Jul-05	Sight meets approx. 55 mph.	1211040000	400	18.21	18.43
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	13	11-Jul-05	Sight meets approx. 62 mph.	1211040000	400	17.73	17.96
722010-	SR 400 FROM SR 140/HOLCOMB BRIDGE RD TO MCFARLAND RD GRTA	3	11-Jul-05	Using 6' -10" shoulder (instead of 10') on SR 400 NB from Holcomb Bridge Road to Winward Parkway.	1211040000	400	14.46	20.11
752960-	CR 186/HEMBREE ROAD @ FOE KILLER CREEK 2 MI SW OF ALPHARETTA	9	23-Oct-06	Sent down for approval on 10/17/06 --- Vertical curve does not meet 35 mph Speed Design	1212018600	186	2.3	2.4

Table 10 continued

753170-	SR 155/CANDLER ROAD ENHANCEMENTS @ GLENWOOD RD - PHASE 1	8	11-May-05	Substand Shifting tapers on Glenwood Acenure (both directions).	891015500	**260** [2]	3.45	3.63
M001994	I-75 @ 3 LOCS IN HENRY & 1 LOC IN SPALDING - BRIDGE JACKING	9	22-Dec-04	Design exception to retain a substd. VC on CR650 (Locust Grove Road) on the Bridge over I-75 (I-75 MP 1.13) (County Road MP 9.17).	1511040100	401	1.13	1.13
M001994	I-75 @ 3 LOCS IN HENRY & 1 LOC IN SPALDING - BRIDGE JACKING	9	22-Dec-04	Design exception to retain a substd. VC on CR115 (Jenkinsburg Road) on the Bridge over I-75 (I-75 MP 0.87+/-)	2551040100	401	0.87	0.87
M003235	I-20 FROM SR 12/SR 124/TURNER HILL ROAD TO SR 20/SR 138	3	16-Jun-07	Substandard Median Shoulder	891040200	402	16.38	4.99
M003235	I-20 FROM SR 12/SR 124/TURNER HILL ROAD TO SR 20/SR 138	3	16-Jun-07	Substandard Outside Shoulder	891040200	402	3.34	3.57

[1] Project 323075-: MPOINT_ROUTE number was corrected from 138 to 155

[2] Project 753170-: MPOINT_ROUTE number was corrected from 155 to 260

Table 11: Design Exceptions from 2003 to 2008 (Adjusted from GDOT MPs)

PROJ_CNTY_PROJ_EXT_PROJ_ID	DS	EXCEPTION_TYPE_CD	APPROVED_DT	COMNT	RC_LINK	GDOT		ADJ_DIST	ADJUSTED	
						MPOINT_BEG	MPOINT_END		MPOINT_BEG	MPOINT_END
0005071	I-95 FM NORTH OF SR 303 TO CR 586	9	16-Nov-05	Substandard vertical curve k value at station 28+00.	1271040500	33.56	33.66	27.70	5.86	5.96
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	104.4		96.90	7.50	7.50
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	105.2		96.90	8.30	8.30
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	105.7		96.90	8.80	8.80
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB I-85. (PVI MP)	1351040300	105.8		96.90	8.90	8.90
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB I-85. (PVI MP)	1351040300	104.4		96.90	7.50	7.50
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB I-85. (PVI MP)	1351040300	105.6		96.90	8.70	8.70
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value NB Collector Distributor PVI Station 36+25. (PVI MP for I-85))	1351040300	104.1		96.90	7.20	7.20
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SB Collector Distributor PVI Station 378+90.25. (PVI MP for I-85)	1351040300	104.1		96.90	7.20	7.20
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	9	9-Sep-05	Substd. K Value SR316 EB Station 925+66.05. (PVI MP I-85)	1351040300	105.7		96.90	8.80	8.80

Table 11 continued

110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shouler Width I-85 NB at Pleasant Hill Road Overpass.	1351040300	104.1		96.90	7.20	7.20
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	2	9-Sep-05	Lane Width I-85 SB south of SR316 interchange.	1351040300	104.1		96.90	7.20	7.20
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	3	9-Sep-05	Shoulder Width I-85 Boggs Road to 1.44 miles north of Old Peachtree Road (3'-8" shoulder at Boggs Road, SR120, and Old P'Tree Road Overpasses.	1351040300	106.3	110.4	96.90	9.40	13.50
110530-	I-85 @ SR 316 INTERCHANGE & HOV LANES	2	9-Sep-05	Lane Width I-85 NB at Pleasant Hill Road Overpass	1351040300	104	104	96.90	7.10	7.10
110620-	I-85 FM N OF SR 211/BARROW TO N OF SR 53/JACKSON	3	30-Oct-06	Substandard inside shoulder width (8'-9" & 9'-8") at overheas sign supports and bridge columns; To FHWA 5/12;	131040300	125.4	129.8	124.80	0.60	5.00
110640-	I-85 FM N OF SR 11 TO N OF SR 82	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	140.4		127.10	13.30	13.30
110640-	I-85 FM N OF SR 11 TO N OF SR 82	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	137.5	137.5	127.10	10.40	10.40
110650-	I-85 FM N OF SR 82 TO N OF SR 98	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	141.4	141.4	127.10	14.30	14.30
110650-	I-85 FM N OF SR 82 TO N OF SR 98	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	143.1	143.1	127.10	16.00	16.00
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	146.6	146.6	127.10	19.50	19.50
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-4"	1571040300	146.7	146.7	127.10	19.60	19.60
110660-	I-85 FM N OF SR 98 TO N OF SR 15 IN BANKS	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1571040300	149.3	149.3	127.10	22.20	22.20
110670-	I-85 FM N OF SR 15/US 441 TO N OF SR 63	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	153.75	153.75	149.00	4.75	4.75

Table 11 continued

110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	155.44	155.44	149.00	6.44	6.44
110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	157.39	157.39	155.50	1.89	1.89
110680-	I-85 FM N OF SR 63 TO N OF SR 51 IN FRANKLIN COUNTY	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	111040300	159.86	159.86	155.50	4.36	4.36
110690-	I-85 FM N OF SR 51 TO N OF SR 320	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	162.23	162.23	155.50	6.73	6.73
110690-	I-85 FM N OF SR 51 TO N OF SR 320	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	163.9	163.9	155.50	8.40	8.40
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	164.82	164.82	155.50	9.32	9.32
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	165.93	165.93	155.50	10.43	10.43
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	167.9	167.9	155.50	12.40	12.40
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	170.03	170.03	155.50	14.53	14.53
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	173.14	173.14	155.50	17.64	17.64
110700-	I-85 FM N OF SR 320 TO N OF SR 17	3	5-Jun-08	Substandard Inside Shoulder - 7'-10"	1191040300	173.24	173.24	155.50	17.74	17.74
110710-	I-85 FM N OF SR 17 TO N/SC STATE LINE IN HART	3	5-Jun-08	Inside shoulder width (9'-10") - 3 locations (174.83; 176.08; 177.29)	1191040300	174.83	177.29	155.50	19.33	21.79
511110-	I-95 FM JUST N OF ALTAMAHA RIVER BRIDGE TO SR 251	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 7" proposed) on I-95 at SR 251.	1911040500	49	49	44.60	4.40	4.40
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 5' - 8" proposed) on I-95 at CR 16.	1911040500	51.3	51.3	44.60	6.70	6.70

Table 11 continued

511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 4" proposed) on I-95 at CR 17.	1911040500	53.6	53.6	44.60	9.00	9.00
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 2" proposed) on I-95 at CR 21.	1911040500	55.6	55.6	44.60	11.00	11.00
511120-	I-95 FM 1 MILE NORTH OF SR 251 TO NORTH OF SR 57 - PHASE I	6	17-Jun-05	Substandard Horizontal Clearance for outside shoulder (14' needed / 6' - 4" proposed) on I-95 at SR 57/99.	1911040500	58.2	58.2	44.60	13.60	13.60
M003243	I-75 FM CRISP CO LINE TO CR 323/PINEHURST-HAWKINSVILLE RD	3	10-Apr-08	Substandard outside shoulder (10') at Penahatchee Creek; To FHWA 3/27/08;	931040100	108.19	109.2	106.00	2.19	3.20

Table 12: Design Exceptions from 2003 to 2008 (Estimated MPs)

PROJ_CNTY_PROJ_EXT_PROJ_ID	DS	EXCEPTION_TYPE_CD	APPROVED_DT	COMNT	RC_LINK	MPOINT_ROUTE	MP_ESTIMATED	
							MPOINT_BEG	MPOINT_END
0000259	CR 65/JONES BRIDGE ROAD @ CR 64/DOUGLAS ROAD	8	13-Oct-05	Intersection skew angle of 52 degrees retained (Douglas Road at Jones Mill Road).	1212006500	65	1.57	1.57
0000261	CR 70/WEBB BRIDGE ROAD @ PARK BRIDGE PARKWAY/SHIRLEY BR RD	8	24-Oct-08	Intersection Angle (49); Requested add'l infor 7/26; To GR 8/11;	1212007000	70	1.16	1.16
0000337	EAST WESLEY SIDEWALK FM PEACHTREE RD TO PIEDMONT RD&BIKE/PED	8	14-Jan-04	One substandard Horiz. Curve (East Wesley Rd)	1213000603	6	5.40	6.90
0000399	SR 92 @ CR 204/HILO RD & CR 375/KINGWOOD DRIVE - TURN LANE	9	25-Mar-08	Substand vertical sag and crest curves	1131009200	92	8.33	8.78
0000683	CR 134/COUNTY LINE ROAD @ POLECAT CREEK @ MURRAY CO LINE	8	12-Jan-06	Horizontal curve runoff lengths between two curves (at back to back s-type curves). This for between curves KC2 and KC3.	1292013400	134	0.42	0.00
0000687	CR 4/DENNIS MILL ROAD @ ROCK CREEK 5.6 MI SE OF CHATSWORTH	12	15-Mar-04	Superelevation runoff length between S-curves (CR4/Dennis Mill Rd)	2132000400	4	1.80	2.30
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	8	12-Jun-08	Substandard Intersection Angle (54-32) at Mauldin Dr	1171000900	9	2.36	2.40

Table 12 continued

0003090	CR 219/BROWN CREEK RD @ BROWN CREEK 5 MI NW OF WAVERLY HALL	12	12-Apr-05	Omission of SE on aggregate road.	1452021900	219	1.00	1.11
0004424	CR 7001/PERIMETER CENTER PARKWAY STREETSCAPE - GRTA	8	10-Jan-05	Retain an existing substandard Horiz Curve radius at PC station 116+75.58. Perimeter Center Parkway.	892700100	7001	0.00	1.00
0004446	LEWIS RD FM SR 6/CH JAMES PKWY TO SR 6BU/NEW S SQ [PE-LCI]	8	22-Feb-08	Substandard intersection angle (58-04-13)	672212200	2122	0.00	1.40
0004650	CR 666/SIGMAN ROAD @ CR 157/GEES MILL ROAD - GRTA	8	29-Jul-08	Substandard intersection angle (58)	2472066600	666	1.00	1.20
0006016	I-75 FROM SR 32 TO SR 159	6	1-Dec-03	Substd Horiz. Clr. On I-75 at SR32 and SR159 (I-75)	2871040100	401	5.00	11.75
0006073	I-75 FM COOK COUNTY LINE TO CR 204/SOUTHWELL BLVD - PHASE I	6	29-Mar-04	Horiz Clr at overpass (I-75)	2771040100	401	0.00	6.27
0006402	I-20 FM I-285/FULTON TO I-285/DEKALB - ATMS RAMP METERS	3	20-Feb-07	Sustandard (2') shoulder width for ATMS ramp metering; To FHWA 1/29/07	891040200	402	2.8	7.4
0007020	CS 540/ROCK LANE ROAD @ NS #733038W	8	6-Sep-05	One Substd. Horizontal Curve (Radius length) on CS540/Rock Lane Road @ NSRR/Forrest Street.	2373054001	540	0.00	0.50
0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	9	27-Feb-07	Substandard "K" value (29) for Bright Star Road	971000500	5	9.90	10.06
0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	8	27-Feb-07	Substandard radius (371') for Bright Star Road	971000500	5	9.90	10.06
0007950	CR 812/CHAPEL HILL RD @ CR 160/CENTRAL & BOMAR CHURCH RD	9	18-Jul-06	Substandard Vertical Curve (K=49.29)	972081200	812	3.68	3.90

Table 12 continued

0007950	CR 812/CHAPEL HILL RD @ CR 160/CENTRAL & BOMAR CHURCH RD	8	18-Jul-06	Substandard radius length	972081200	812	3.68	3.90
0008274	I-75 SB FM I-675 TO EAGLES LANDING PKWY- AUXILIARY LANE	3	14-Dec-06	Substand inside shoulder width at Walt Stephend Rd overpass; To FHWA 12/06	1511040100	401	17.10	18.59
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	9	10-Oct-07	Substandard "K" value on Nowhere Road (13.5	592060000	600	1.55	2.75
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	1	10-Oct-07	Boley Road (26 mph)	592060000	600	1.55	2.65
121970-	CR 600/DANIELSVILLE RD FM 4-LN NEAR CR 109 TO WALKER DRIVE	1	10-Oct-07	Nowhere Road (25 mph)	592060000	600	1.55	2.65
171004-	CR 86/JEFFERSON RIVER RD @ CURRY CREEK 3.6 MI E OF ARCADE	9	25-Feb-03	2 substd. Vertical Curves (CR86/Jefferson River Rd.)	1572008600	86	3.70	4.59
210810-	I-20 FM ALCOVY ROAD INCL INTERCHANGE TO SR 142 IN COVINGTON	8	28-Jun-06	Substandard radiuss - City Pond Rd & Industrial Drive	2172007400	74	6.18	8.14
351120-	BLOOMFIELD RD/LOG CABIN DR FM ROCKY CK RD TO SR 22/EISENHOWE	8	14-Aug-06	Substandard radius length - Bloomfield Rd	211102300	1023	0.50	3.08
351210-	SR 3/US 19 TURN LANES AT SR 362 IN GRIFFIN	3	18-Mar-03	Substd shoulder width/Horiz. Clr. Under BR. (SR362)	2551000300	3	2.50	4.53

Table 12 continued

410245-	I-75 FM TIFT COUNTY LINE TO SR 32 - PHASE I	6	29-Mar-04	Substd Horiz. Clr. On I-75 at Inaha Rd (CR252) (I-75)	2871040100	401	0.00	5.00
410510-	I-75 FM LOWNDES COUNTY LINE TO NORTH OF SR 37 - PHASE 1	6	29-Mar-04	Horiz Clr at two overpasses (I-75)	751040100	401	30.94	8.60
410520-	I-75 FM SR 37 TO CR 246/KINARD BRIDGE RD - PHASE I	6	29-Mar-04	Horiz Clr at three overpasses (I-75)	751040100	401	8.20	18.06
410530-	I-75 FM CR 246/KINARD BRIDGE RD TO TIFT COUNTY LINE-PHASE I	6	29-Mar-04	Horiz Clr at one overpasse (I-75)	751040100	401	17.40	21.19
442740-	CR 307/OLD GA HWY 3 @ BIG SLOUGH & OVERFLOW IN NORTH CAMILLA	4	11-Jan-05	Bridge Width of 32' instead of 40' on CR307 @ Big Slough and Big Slough Overflow. Historic.	2052030700	307	0.80	1.32
511180-	I-16 @ I-516 & @ STILES AVE - BRIDGE REPAIRS	7	20-Aug-03	Substd Br. Clearance 3 bridges (1 to 3 inches) (I-16)	511040400	404	14.95	17.68
511180-	I-16 @ I-516 & @ STILES AVE - BRIDGE REPAIRS	7	20-Aug-03	Substd Br. Clearance 3 bridges (1 to 3 inches) (I-16)	511040400	404	14.95	16.55
550570-	MIDDLEGROUND/MONTGOMERY CROSS RD FM SR 204/ABERCORN TO SR204	8	24-Dec-03	Horizontal alignment/Super-elevation (Middleground Rd)	513114407	1144	0.00	2.93
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100	5.54	16.74
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100	5.54	16.74

Table 12 continued

712870-	I-20 @ LITHONIA INDUSTRIAL BLVD	13	28-Mar-03	Stopping sight distance (Evans Mill Road)	891040200	402	14.90	14.90
712870-	I-20 @ LITHONIA INDUSTRIAL BLVD	3	20-May-03	Inside shoulder width less than 10' (I-20)	891040200	402	12.90	17.13
721940-	SR 410 ATMS/COMM/SURVEIL FM LAWRENCEVILLE HWY TO E PARK PL	8	7-Dec-06	Substandard Acceleration Distance (805')	891041000	410	7.50	0.80
751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	11	30-Nov-07	Excessive vertical grades (8.25% & 9.68%)	671094700	947	3.33	1.07
751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	8	16-Apr-08	Design Exception for Sub-Standard Skew Angle of Riverside Drive to Johnson Ferry Road (55^ 43' 11"). This was included with 2 other Design Exception Requests and 3 other Design Variance Requests. Sent to the Chief Engineer on 4/10/08.	671094700	947	3.33	1.07
751300-	JOHNSON FERRY RD FM COLUMNS DR TO ABERNATHY & BRIDGE	8	29-Apr-08	Design Exception for a Sub-Standard radius on Riverside Drive of 69' (420' required for 4% SE). This was included with 2 other Design Exception requests and 3 other Design Variance requests. Submitted to the Chief Engineer on 4/10/08.	671094700	947	3.33	1.07
753025-	SR 6BU/MARIETTA ST FM NEW MACLAND RD TO BROWNSVILLE RD/BIKE	6	2-May-03	Substd horizontal Clearance/Clear zone (Marietta St.)	06710006BU	6	2.49	3.05

Table 13: Design Exceptions from 2003 to 2008 (MPs obtained from Design Documents)

PROJ_CNTY _PROJ_EXT_ PROJ_ID	DS	EXCEPTION _TYPE_CD	APPROVED _DT	COMNT	RC_LINK	MPOINT _ROUTE	MPOINT _BEG	MPOINT _END
0000399	SR 92 @ CR 204/HILO RD & CR 375/KINGWOOD DRIVE - TURN LANE	9	22-Jun-07	Substandard sag vertical (63.36) for 55 mph (115)	1131009200	92	8.33	8.79
0000476	CR 1061/OLD SR 5 @ HICKORY RD & HOLLY ST IN HOLLY SPRINGS	9	15-Feb-06	Desgn Exception is for vertical profile of the Hickory Road Leg of the project. The substandard vertical curvature is at the Railroad between Holly Springs Pkwy and Palm Street (R/R is between these two streets along Hickory Road).	572106100	1061	7.14	7.32
0000554	ALEXANDER ST FM LUCKIE STREET TO WEST PEACHTREE STREET- GRTA	9	3-Sep-04	Substd VC on Ivan Allen Blvd @ Cent. Olympic Park Drive.	1213181003	1810	2.13	2.69
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	11	12-Jun-08	10.74% on Castleberry Rd	1171000900	9	4.24	4.52
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	9	12-Jun-08	Substandard K value (56.72) on SR 371	1171000900	9	3.00	3.29
0000810	SR 9 @ 6 INTERSECTIONS AND SR 20 @ TRIBBLE RD	9	18-Jun-08	Excessive Breakover (9.28%) on Spot Rd	1171000900	9	15.57	15.89
0001077	SR 16 FM JEFFERSON AVE TO EAST OF ROOTY CREEK IN EATONTON	9	26-Jun-03	Substd "K" values on N. and S. Grand Ave and substd shoulder width/lane width on S. Putnam St. (SR16 Side Roads)	2371001600	16	9.27	10.00

Table 13 continued

0001575	SR 53 MEDIAN TURN LANES FROM EAST ROME BYPASS TO GORDON CO	8	16-Oct-06	Substandard Intersection Angle - Bells Ferry Rd (41o); Tift Rd (45o); Pierce Rd (55o);	1151005300	53	24.43	34.36
0004266	SR 1/US 27 FM SR 151 TO LAFAYETTE BYPASS	9	6-Feb-03	8 substd sag VC (met 1994 but not 2001) (US27/SR1)	2951000100	1	0.57	7.62
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	8	18-Jan-08	Substandard intersection angle (55-19-23 Floyd Rd); Returned to D7 12/19/2007; Resubmitted to G Ross 1/15/2008;	671000500	5	4.01	4.01
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	8	5-Feb-08	Substandard radii for 35 mph speed design (373') (100' - Sandtown & 170' - Olive Springs)	671000500	5	9.70	9.70
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	3	10-Apr-08	Substandard shoulder width; Returned to D7 for corrections 3/26; sent to Chief Engineer on 4/9/08	671000500	5	3.00	9.74
0004405	SR 5/AUSTELL @ 6 LOCS BTWN CLAY RD TO SANDTOWN RD - GRTA	1	5-Feb-08	Substandard speed design (21-Sandtown & 25-Olive Springs)	671000500	5	9.70	9.70
0006867	CR 895/TOWER ROAD FROM SR 5/CHURCH STREET TO RR #340395	3	24-Oct-08	Substandard shoulder width (0'-5'-2")	672089500	895	0.00	0.81
0007069	SR 5/BILL ARP ROAD @ CR 192/BRIGHT STAR ROAD	13	27-Feb-07	Substandard Intersection Sight Distance (390') on Bright Star Road	971000500	5	9.82	10.07
0007070	SR 140/HOLCOMB BRIDGE ROAD @ CR 107/BARNWELL ROAD	13	12-Oct-08	Returned 7/02 for plan sheets; To GR 8/11;	1211014000	140	12.44	12.90
410500-	I-75 FM NORTH OF SR 133 TO COOK COUNTY LINE - PHASE 1	3	10-May-05	Substandard Shoulder Width on Val Tech Road (using 4.5' shouldrs instead of 8') for a distance of 550' parralel and next to Ramp B (I-75).	1851040100	401	17.30	31.30

Table 13 continued

422250-	SR 31/US 441 @ MILL CREEK	8	11-Feb-03	One substd. Horizontal curve/meets 1994 not 2001 (SR31/US441)	691003100	31	27.70	28.43
641910-	SR 100 NB MP 5.5-6.8; NB MP 13.3-14.55; SB MP 15.3-16.8	9	18-May-04	(3R guidelines used) MP5.67 to 5.71, 6.11 to 6.17, 6.42 to 6.49, 13.55 to 13.63, 14.23 to 14.29, 15.73 to 15.79, and 16.69 to 16.79 (SR100)	451010000	100	5.50	16.80
731520-	SR 3/US 19 @ CEN OF GA RAILROAD .35 MI S OF JCT I-285	8	17-Nov-03	Old Dixie Hwy (side raod) at SR3 Horiz. Alignment (Old Dixie Hwy at SR3/US19)	631000300	3	14.39	14.88
751320-	CR 5189/ROCKBRIDGE RD @ SNAPFINGER CREEK	9	26-Jun-03	One Substd Sag VC meets 1994 not 2001 AASHTO (Rockbridge Rd)	891085700	857	8.01	8.33
752020-	PEACHTREE ST @ GEORGIA RR & MARTA @ UNDERGROUND ATLANTA	2	10-Apr-03	Substd lane width/substd horiz align. (Peachtree St.)	1213066103	**1029** [3]	0.00	0.19
752940-	CR 5194/FLAT SHOALS ROAD @ DOLITTLE CREEK JUST SOUTH OF I-20	9	4-Apr-03	Substd. Vertical Curve (Battlecrest Dr)	892519400	5194	3.20	3.37
753100-	CR 810/KINGS HIGHWAY @ CR 173/CENTRAL CHURCH RD	8	6-Jul-07	Substandard radius (660') for 45 mph SD	972081000	810	4.04	4.24
771273-	CR 629/JOHNSON ROAD @ PEEKS CREEK 1 MI E OF PALMETTO	9	22-Sep-03	Sag vertical curve meets speed design of 35 mph but not posted speed of 45 mph (CR629/Johnson Road)	1212062900	629	1.04	1.18

[3] Project 752020-: MPOINT_ROUTE number was corrected from 661 to 1029

APPENDIX C: TOTAL CRASH RESULTS

The crash data shown in Table 14 below represents crashes over the project lengths beyond the design exception locations. For this reason, the annual aggregated crashes may not be correlated with design exceptions. Future efforts will be needed to explore a potential relationship between the crash data and design exceptions.

Table 14: Annual and 3-Year Average Crash Counts for Aggregate Data

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	15	13	19	24	23	23	18	32	29	24	220	22	26.33	13-Oct-05
0000261	0	6	1	0	4	3	3	4	0	0	21	4	0	24-Oct-08
0000266	5	7	6	2	4	4	4	0	2	1	35	5	2.667	8-Dec-04
0000337	7	12	6	6	5	7	6	7	4	4	64	8	6.667	14-Jan-04
0000399	17	17	17	14	19	26	31	24	26	16	207	28.5	21	22-Jun-07
0000399	17	17	17	14	19	26	31	24	26	16	207	24	16	25-Mar-08
0000418	2	31	22	9	9	26	24	19	15	7	164	14.67	13.67	7-Jul-06
0000476	5	4	3	5	8	4	8	5	7	1	50	5.667	4.333	15-Feb-06
0000554	72	83	83	88	96	54	83	88	97	77	821	84.67	75	3-Sep-04
0000683	1	0	0	0	2	1	1	0	0	0	5	1	0	12-Jan-06
0000687	4	1	1	0	0	0	0	3	1	1	11	0.667	1	15-Mar-04

Table 14 continued

0000810	61	87	76	81	84	84	106	132	84	57	852	132	57	12-Jun-08
0000846	3	2	6	2	3	1	0	2	2	1	22	3.667	1.333	28-Oct-03
0001077	20	12	18	21	16	8	10	7	7	5	124	16.67	11.33	26-Jun-03
0001298	278	337	273	190	247	358	364	390	257	143	2837	265	263.3	29-Jun-06
0001364	1	0	0	1	0	1	3	0	3	0	9	0	0	13-Mar-08
0001558	22	26	33	24	27	24	38	27	39	22	282	31	30.5	29-Jan-07
0001575	72	64	63	78	71	81	55	51	52	49	636	76.67	50.67	16-Oct-06
0002041	0	0	0	0	0	1	4	4	2	4	15	2.5	3	14-Mar-07
0003085	0	0	2	1	2	0	1	1	4	1	12	1	0.667	14-Jun-04
0003086	0	0	2	1	2	0	1	1	4	1	12	1	0.667	14-Jun-04
0003090	0	0	1	0	1	3	0	0	0	0	5	0.667	0	12-Apr-05
0004166	174	162	135	145	144	132	117	121	105	72	1307	141.3	114.3	4-Mar-05
0004266	28	37	35	43	35	32	34	23	23	22	312	33.33	33.67	6-Feb-03
0004405	855	863	821	859	805	712	661	631	638	419	7264	631	419	1/18/2008, 2/5/2008, 4/10/2008
0004424	8	8	3	5	7	5	11	8	0	1	56	5	6.333	10-Jan-05
0004446	2	1	2	2	1	0	2	2	1	0	13	2	0	22-Feb-08
0004650	5	14	10	8	5	6	13	9	8	7	85	9	7	29-Jul-08
0005071	0	0	0	0	0	0	0	1	3	3	7	0	1.333	16-Nov-05
0006016	43	62	57	42	49	77	59	54	39	22	504	54	61.67	1-Dec-03
0006073	52	42	48	58	64	52	40	33	32	47	468	49.33	41.67	29-Mar-04
0006365	7	1	1	2	10	13	4	19	11	13	81	19	13	2-May-08
0006402	1734	1784	1699	1502	1641	1731	1781	1595	1598	1404	16469	1756	1597	20-Feb-07
0006867	20	18	17	13	7	20	17	1	1	3	117	1	3	24-Oct-08
0006952	18	22	24	22	18	29	31	15	16	21	216	22.67	25	3-Sep-04

Table 14 continued

0007020	3	0	4	0	0	4	1	0	5	2	19	1.333	2	6-Sep-05
0007069	13	19	13	14	12	8	11	14	9	11	124	9.5	10	27-Feb-07
0007070	46	45	35	43	39	51	48	30	22	22	381	30	22	12-Oct-08
0007240	10	10	2	4	5	5	7	11	6	6	66	6	6	24-Apr-07
0007493	6	5	14	11	18	16	15	19	2	3	109	15	8	10-Oct-06
0007950	10	24	20	29	23	19	20	12	27	22	206	23.67	20.33	18-Jul-06
0008234	40	109	107	143	129	138	150	127	84	56	1083	136.7	89	18-Dec-06
0008274	67	91	120	140	185	138	110	107	114	87	1159	154.3	102.7	14-Dec-06
110530-	173	476	654	778	860	756	804	741	623	414	6279	764	722.7	9-Sep-05
110620-	40	22	8	2	8	1	61	41	48	35	266	3.667	41.33	30-Oct-06
110640-	22	14	14	21	25	21	23	29	22	26	217	29	26	5-Jun-08
110650-	6	8	9	7	12	8	7	4	1	7	69	4	7	5-Jun-08
110660-	7	10	24	12	10	10	10	6	12	13	114	6	13	5-Jun-08
110670-	40	29	31	45	46	36	32	44	39	33	375	44	33	5-Jun-08
110680-	20	26	38	33	26	25	36	41	25	22	292	41	22	5-Jun-08
110690-	7	10	9	16	6	12	11	9	9	6	95	9	6	5-Jun-08
110700-	71	71	72	75	101	83	84	109	74	61	801	109	61	5-Jun-08
110710-	7	3	12	9	17	11	8	13	9	3	92	13	3	5-Jun-08
121970-	19	18	9	12	11	12	10	14	1	1	107	11	1	10-Oct-07
122320-	48	42	46	30	41	46	47	49	29	24	402	39.33	47.33	8-Mar-04
171004-	0	1	2	0	0	1	1	0	0	1	6	1	0.667	25-Feb-03
210810-	44	27	39	29	62	66	53	78	56	58	512	52.33	64	28-Jun-06
231220-	15	5	6	8	29	32	24	39	37	22	217	28	29.5	8-Aug-07
232240-	21	18	13	24	22	24	14	14	7	3	160	17.33	20	13-Aug-03
232260-	20	11	21	24	20	24	29	29	10	9	197	22.67	16	2-May-06

Table 14 continued

232260-	20	11	21	24	20	24	29	29	10	9	197	26.5	9.5	12-Mar-07
232315-	0	0	2	0	1	1	1	2	0	2	9	0.667	1	10-Sep-03
245370-	1	2	0	1	1	0	0	1	0	1	7	1	0.333	19-Aug-03
245371-	0	1	1	2	2	1	0	0	1	2	10	0.667	1	10-Sep-03
311630-	6	12	8	19	41	12	10	18	45	44	215	24	35.67	22-Jun-06
322350-	19	10	15	13	19	18	11	13	14	9	141	16.67	12	2-May-06
322420-	1	6	1	5	5	5	4	4	5	2	38	2.667	4.667	11-Sep-03
322922-	9	11	4	10	10	8	6	3	6	4	71	7	5	20-Jun-07
323075-	13	17	13	13	14	21	13	27	12	7	150	27	7	28-Mar-08
332360-	0	0	1	0	4	1	0	2	1	3	12	0.333	1	13-Jan-04
333160-	0	0	0	0	0	0	0	0	1	0	1	0	0	22-Sep-03
333185-	0	0	0	0	1	23	13	14	10	10	71	0.333	12.33	17-May-05
333202-	1	1	1	4	2	1	2	0	0	2	14	1	1.667	22-Sep-03
343345-	0	0	0	0	0	1	2	0	0	2	5	0	1	9-Feb-04
343355-	5	1	0	1	1	0	0	0	2	3	13	0.667	0.667	6-Jun-05
343365-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	8/26/2003, 9/2/2003
343385-	0	0	1	1	3	2	2	2	3	2	16	0.667	2	26-Oct-04
351120-	35	62	76	78	55	55	66	75	60	40	602	62.67	58.33	14-Aug-06
351170-	13	11	10	7	14	9	13	10	11	2	100	10	7.667	18-Jan-06
351210-	49	39	39	26	25	37	16	32	23	9	295	42.33	26	18-Mar-03
410245-	30	40	24	27	28	28	41	27	21	19	285	30.33	32	29-Mar-04
410500-	196	201	196	267	230	232	168	160	118	66	1834	231	148.7	10-May-05
410510-	82	90	132	96	123	163	193	116	71	56	1122	106	157.3	29-Mar-04
410520-	78	93	110	100	85	75	77	64	77	90	849	101	72	29-Mar-04
410530-	15	19	17	24	18	12	20	23	23	48	219	20	18.33	29-Mar-04

Table 14 continued

422250-	0	1	2	2	2	1	0	0	1	1	10	1	1	11-Feb-03
442740-	1	0	1	1	2	0	2	5	2	0	14	1.333	3	11-Jan-05
511110-	42	29	30	38	50	29	20	5	14	9	266	39.33	13	17-Jun-05
511120-	48	59	76	43	60	38	36	16	17	9	402	59.67	23	17-Jun-05
511180-	26	18	34	18	25	17	27	12	24	20	221	26	23	20-Aug-03
550570-	62	52	64	54	50	47	65	69	66	28	557	59.33	54	24-Dec-03
620399-	4	6	6	4	3	2	3	1	1	0	30	5.333	2.667	10-Sep-03
620590-	291	275	290	322	336	378	316	302	263	209	2982	295.7	332	21-Jan-04
621580-	3	1	0	0	3	7	0	0	0	0	14	0.333	2.333	1/7/2004, 5/4/2004
631630-	10	6	11	8	11	13	13	13	12	16	113	13	14	25-Jul-07
641910-	22	24	21	30	37	57	35	36	46	18	326	25	42.67	18-May-04
642165-	5	6	8	12	16	8	6	7	2	6	76	8.667	7	27-Feb-04
712870-	180	201	250	310	427	437	395	356	317	272	3145	210.3	419.7	3/28/2003, 5/20/2003
721940-	535	554	594	663	626	728	693	640	540	487	6060	672.3	555.7	7-Dec-06
722010-	920	850	710	836	975	1060	1144	942	785	617	8839	798.7	1049	11-Jul-05
722010-	920	850	710	836	975	1060	1144	942	785	617	8839	957	781.3	4-Dec-06
731520-	46	29	22	31	50	36	28	50	52	21	365	32.33	38	17-Nov-03
751300-	30	36	36	26	63	51	59	61	25	21	408	55	23	30-Nov-07
751300-	30	36	36	26	63	51	59	61	25	21	408	61	21	4/16/2008, 4/29/2008
751320-	22	18	11	9	2	0	0	0	0	0	62	17	0.667	26-Jun-03
752020-	10	22	12	23	14	27	15	10	16	10	159	14.67	18.67	10-Apr-03
752940-	1	0	1	2	1	1	0	0	0	1	7	0.667	0.667	4-Apr-03
752960-	0	2	3	1	0	1	0	1	0	0	8	0.667	0.333	23-Oct-06
753025-	38	27	39	26	15	0	0	0	0	0	145	34.67	5	2-May-03

Table 14 continued

753100-	4	3	11	7	5	5	3	3	5	6	52	4	5.5	6-Jul-07
753170-	48	61	63	47	52	43	20	11	9	6	360	54	13.33	11-May-05
771273-	0	5	2	2	2	3	2	3	4	2	25	2.333	2.333	22-Sep-03
M001994	19	31	25	59	34	31	33	36	31	29	328	38.33	33.33	22-Dec-04
M003235	250	281	310	370	430	522	471	457	376	345	3812	496.5	360.5	16-Jun-07
M003243	9	14	9	12	6	12	10	4	8	7	91	4	7	10-Apr-08

APPENDIX D: CRASH RESULTS BY SEVERITY

The crash data shown in Tables 15 – 17 below represents crashes over the project lengths beyond the design exception locations. For this reason, the annual crashes by severity type may not be correlated with design exceptions. Future efforts will be needed to explore a potential relationship between the crash data and design exceptions.

Table 15: Annual and 3-Year Average Crash Counts for Fatal Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Oct-05
0000261	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Oct-08
0000266	0	0	0	0	0	0	0	0	0	0	0	0	0	8-Dec-04
0000337	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jan-04
0000399	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Jun-07
0000399	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Mar-08
0000418	0	0	0	0	0	0	0	0	0	0	0	0	0	7-Jul-06
0000476	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Feb-06
0000554	0	0	0	0	0	0	0	0	0	0	0	0	0	3-Sep-04
0000683	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Mar-04

Table 15 continued

0000810	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jun-08
0000846	0	0	1	2	0	1	0	0	1	1	6	0.333	0.333	28-Oct-03
0001077	1	0	0	0	0	0	0	0	0	0	1	0.333	0	26-Jun-03
0001298	0	0	0	0	0	0	0	1	0	0	1	0	0.333	29-Jun-06
0001364	0	0	0	1	0	0	0	0	0	0	1	0	0	13-Mar-08
0001558	1	0	0	0	0	0	0	2	1	1	5	0	1.5	29-Jan-07
0001575	1	0	4	1	2	2	0	0	0	0	10	1.667	0	16-Oct-06
0002041	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05
0004166	0	0	0	1	0	0	0	0	0	0	1	0.333	0	4-Mar-05
0004266	1	0	0	1	0	1	0	0	0	0	3	0.333	0.333	6-Feb-03
0004405	4	1	2	1	3	3	1	2	1	0	18	2	0	1/18/2008, 2/5/2008, 4/10/2008
0004424	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Jan-05
0004446	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Feb-08
0004650	0	0	0	0	0	0	0	0	0	0	0	0	0	29-Jul-08
0005071	0	0	0	0	0	0	0	0	0	0	0	0	0	16-Nov-05
0006016	1	2	0	2	1	5	1	3	1	0	16	1	2.333	1-Dec-03
0006073	1	1	0	0	3	1	0	0	0	0	6	0.333	0.333	29-Mar-04
0006365	0	0	0	0	0	0	0	0	0	0	0	0	0	2-May-08
0006402	9	6	0	6	4	4	8	4	1	1	43	6	2.5	20-Feb-07
0006867	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Oct-08
0006952	0	0	0	0	0	0	0	0	0	0	0	0	0	3-Sep-04

Table 15 continued

0007020	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Sep-05
0007069	0	0	0	0	0	0	0	0	0	0	0	0	0	27-Feb-07
0007070	0	0	0	0	0	0	0	0	0	1	1	0	1	12-Oct-08
0007240	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Apr-07
0007493	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Oct-06
0007950	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Jul-06
0008234	0	3	0	0	0	0	1	0	1	1	6	0	0.667	18-Dec-06
0008274	0	1	0	1	1	3	0	0	0	0	6	1.667	0	14-Dec-06
110530-	1	3	0	1	3	0	2	1	1	2	14	1.333	1.333	9-Sep-05
110620-	0	1	0	1	0	0	0	1	0	0	3	0.333	0.333	30-Oct-06
110640-	0	0	0	0	1	1	1	2	0	1	6	2	1	5-Jun-08
110650-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110660-	0	0	0	0	0	1	0	0	2	0	3	0	0	5-Jun-08
110670-	1	1	0	0	2	1	2	0	1	0	8	0	0	5-Jun-08
110680-	0	0	1	1	1	0	1	0	0	0	4	0	0	5-Jun-08
110690-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110700-	3	3	1	2	2	0	0	1	2	1	15	1	1	5-Jun-08
110710-	0	0	0	0	1	1	0	0	1	0	3	0	0	5-Jun-08
121970-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Oct-07
122320-	1	2	1	0	0	1	1	0	0	0	6	1	0.667	8-Mar-04
171004-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Feb-03
210810-	0	0	2	1	0	0	0	1	0	0	4	0.333	0.333	28-Jun-06
231220-	0	0	0	0	0	0	0	0	0	0	0	0	0	8-Aug-07
232240-	0	0	0	0	0	1	0	0	0	0	1	0	0.333	13-Aug-03
232260-	0	0	0	0	0	0	0	0	0	0	0	0	0	2-May-06

Table 15 continued

232260-	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Mar-07
232315-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
245370-	0	0	0	0	0	0	0	0	0	0	0	0	0	19-Aug-03
245371-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
311630-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Jun-06
322350-	0	0	0	0	0	2	0	0	0	0	2	0.667	0	2-May-06
322420-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Sep-03
322922-	0	0	0	0	0	0	0	0	0	0	0	0	0	20-Jun-07
323075-	0	0	0	0	0	0	0	0	0	0	0	0	0	28-Mar-08
332360-	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	0	0	0	0	0	0	0	0	0	17-May-05
333202-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
343345-	0	0	0	0	0	0	0	0	0	0	0	0	0	9-Feb-04
343355-	0	0	0	0	0	0	0	0	0	1	1	0	0	6-Jun-05
343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Oct-04
351120-	0	0	0	0	0	0	0	1	0	0	1	0	0.333	14-Aug-06
351170-	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Jan-06
351210-	0	0	0	2	0	1	0	0	0	0	3	0	0.333	18-Mar-03
410245-	2	1	1	3	3	1	2	0	0	0	13	1.667	1	29-Mar-04
410500-	2	0	1	3	1	1	3	1	0	0	12	1.667	1.333	10-May-05
410510-	0	1	1	1	2	4	1	0	4	0	14	1	1.667	29-Mar-04
410520-	1	3	1	1	2	0	2	0	0	1	11	1.667	0.667	29-Mar-04
410530-	2	0	0	0	0	0	0	1	0	0	3	0	0.333	29-Mar-04

Table 15 continued

422250-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Feb-03
442740-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Jan-05
511110-	1	0	0	0	0	1	0	0	0	3	5	0	0	17-Jun-05
511120-	0	2	3	0	5	1	1	0	0	1	13	2.667	0.333	17-Jun-05
511180-	0	0	0	0	0	0	1	0	0	1	2	0	0.333	20-Aug-03
550570-	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Dec-03
620399-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
620590-	0	1	0	1	0	1	0	0	0	0	3	0.667	0.333	21-Jan-04
621580-	0	0	0	0	0	0	0	0	0	0	0	0	0	1/7/2004, 5/4/2004
631630-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Jul-07
641910-	0	1	0	0	5	1	1	1	2	0	11	0.333	1	18-May-04
642165-	1	1	0	1	1	0	0	0	0	1	5	0.667	0	27-Feb-04
712870-	1	2	0	2	0	0	1	1	0	0	7	1	0.333	3/28/2003, 5/20/2003
721940-	3	6	1	1	2	3	2	2	3	2	25	2	2.333	7-Dec-06
722010-	2	3	1	1	2	5	2	0	3	0	19	1.333	1.667	11-Jul-05
722010-	2	3	1	1	2	5	2	0	3	0	19	2.667	1	4-Dec-06
731520-	0	0	0	0	0	1	0	0	1	0	2	0	0.333	17-Nov-03
751300-	0	0	0	1	0	0	0	0	0	0	1	0	0	30-Nov-07
751300-	0	0	0	1	0	0	0	0	0	0	1	0	0	4/16/2008, 4/29/2008
751320-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Jun-03
752020-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Apr-03
752940-	0	0	0	0	0	0	0	0	0	0	0	0	0	4-Apr-03
752960-	0	0	0	0	0	0	0	0	0	0	0	0	0	23-Oct-06
753025-	0	0	0	0	0	0	0	0	0	0	0	0	0	2-May-03

Table 15 continued

753100-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jul-07
753170-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-May-05
771273-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
M001994	0	0	0	1	0	0	0	0	1	0	2	0.333	0	22-Dec-04
M003235	0	2	0	1	1	2	2	1	0	1	10	2	0.5	16-Jun-07
M003243	0	0	0	0	0	0	0	0	0	1	1	0	1	10-Apr-08

Table 16: Annual and 3-Year Average Crash Counts for PDO Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	14	10	19	22	21	20	18	23	22	15	184	20.67	21	13-Oct-05
0000261	0	3	1	0	3	3	3	3	0	0	16	3	0	24-Oct-08
0000266	4	5	6	2	3	4	2	0	2	1	29	4.333	2	8-Dec-04
0000337	3	10	5	6	4	6	5	6	4	3	52	7	5.667	14-Jan-04
0000399	10	16	14	10	15	14	21	19	17	11	147	17.5	18	22-Jun-07
0000399	10	16	14	10	15	14	21	19	17	11	147	19	11	25-Mar-08
0000418	2	25	16	7	7	21	20	12	11	6	127	11.67	9.667	7-Jul-06
0000476	3	4	2	3	7	4	7	5	2	1	38	4.667	2.667	15-Feb-06
0000554	51	59	63	67	73	41	69	70	81	64	638	63	60	3-Sep-04
0000683	1	0	0	0	0	1	0	0	0	0	2	0.333	0	12-Jan-06
0000687	1	0	0	0	0	0	0	2	1	0	4	0	0.667	15-Mar-04
0000810	49	66	59	64	64	62	74	99	58	42	637	99	42	12-Jun-08
0000846	2	2	6	2	2	0	0	1	1	1	17	3.333	0.667	28-Oct-03
0001077	14	6	12	14	11	4	6	5	5	2	79	10.67	7	26-Jun-03
0001298	232	283	237	150	197	296	288	320	208	114	2325	214.3	214	29-Jun-06
0001364	1	0	0	0	0	0	2	0	1	0	4	0	0	13-Mar-08
0001558	12	19	20	13	12	16	25	15	18	13	163	20.5	16.5	29-Jan-07
0001575	55	52	39	56	52	53	40	37	38	35	457	53.67	36.67	16-Oct-06
0002041	0	0	0	0	0	1	3	2	1	1	8	2	1.5	14-Mar-07
0003085	0	0	1	0	0	0	0	1	3	1	6	0.333	0.333	14-Jun-04
0003086	0	0	1	0	0	0	0	1	3	1	6	0.333	0.333	14-Jun-04

Table 16 continued

0003090	0	0	0	0	1	1	0	0	0	0	2	0.333	0	12-Apr-05
0004166	128	121	96	105	109	101	95	89	83	63	990	103.3	89	4-Mar-05
0004266	17	25	22	18	27	22	23	18	17	16	205	21.33	24	6-Feb-03
0004405	619	638	594	646	585	531	519	499	496	297	5424	499	297	1/18/2008, 2/5/2008, 4/10/2008
0004424	8	6	3	5	6	5	10	8	0	1	52	4.667	6	10-Jan-05
0004446	2	1	2	0	1	0	2	1	1	0	10	1	0	22-Feb-08
0004650	3	8	8	7	5	2	8	6	6	7	60	6	7	29-Jul-08
0005071	0	0	0	0	0	0	0	0	2	2	4	0	0.667	16-Nov-05
0006016	23	35	36	26	32	49	41	38	31	18	329	31.33	40.67	1-Dec-03
0006073	33	22	25	40	36	30	27	24	22	35	294	29	27	29-Mar-04
0006365	6	1	1	2	8	12	3	15	9	11	68	15	11	2-May-08
0006402	1203	1210	1167	1029	1157	1171	1232	1115	1158	966	11408	1202	1137	20-Feb-07
0006867	17	12	11	9	7	16	17	1	0	1	91	1	1	24-Oct-08
0006952	16	18	19	20	16	23	24	15	15	18	184	19	20.67	3-Sep-04
0007020	2	0	3	0	0	4	1	0	4	2	16	1	1.667	6-Sep-05
0007069	12	16	9	8	10	7	8	7	5	7	89	7.5	6	27-Feb-07
0007070	33	33	25	33	35	40	40	25	18	13	295	25	13	12-Oct-08
0007240	8	8	2	3	4	4	6	10	4	5	54	5	7	24-Apr-07
0007493	6	4	9	10	13	12	12	14	2	1	83	11.67	5.667	10-Oct-06
0007950	7	15	12	24	17	13	15	8	22	14	147	18	14.67	18-Jul-06
0008234	34	82	86	119	101	103	122	95	65	43	850	107.7	67.67	18-Dec-06
0008274	48	73	99	114	143	111	87	80	90	61	906	122.7	77	14-Dec-06
110530-	131	359	539	621	689	609	639	611	490	297	4985	616.3	580	9-Sep-05
110620-	27	15	4	0	3	1	49	34	42	28	203	1.333	34.67	30-Oct-06
110640-	16	10	8	16	15	14	14	23	13	19	148	23	19	5-Jun-08

Table 16 continued

110650-	4	4	7	5	10	4	4	3	1	4	46	3	4	5-Jun-08
110660-	2	8	16	9	5	6	9	4	7	12	78	4	12	5-Jun-08
110670-	17	17	21	31	34	23	23	33	30	22	251	33	22	5-Jun-08
110680-	7	20	28	26	19	17	26	29	17	18	207	29	18	5-Jun-08
110690-	5	7	5	12	2	6	8	8	7	5	65	8	5	5-Jun-08
110700-	46	47	51	52	71	66	64	75	51	46	569	75	46	5-Jun-08
110710-	4	1	10	4	11	8	7	10	5	3	63	10	3	5-Jun-08
121970-	15	11	5	8	7	7	3	9	0	1	66	5	4.5	10-Oct-07
122320-	31	29	23	19	26	27	30	41	19	19	264	23.67	32.67	8-Mar-04
171004-	0	1	2	0	0	1	0	0	0	0	4	1	0.333	25-Feb-03
210810-	27	21	26	22	49	43	43	60	42	45	378	38	49	28-Jun-06
231220-	10	5	5	6	17	23	20	28	32	16	162	21.5	30	8-Aug-07
232240-	16	12	9	18	17	15	11	7	4	3	112	12.33	14.33	13-Aug-03
232260-	11	7	13	18	16	14	19	21	7	7	133	16	11.67	2-May-06
232260-	11	7	13	18	16	14	19	21	7	7	133	16.5	14	12-Mar-07
232315-	0	0	2	0	0	1	0	1	0	1	5	0.667	0.333	10-Sep-03
245370-	1	1	0	1	0	0	0	1	0	1	5	0.667	0	19-Aug-03
245371-	0	0	1	2	2	1	0	0	0	0	6	0.333	1	10-Sep-03
311630-	6	9	4	10	34	10	6	14	34	37	164	18	28.33	22-Jun-06
322350-	16	9	11	13	15	12	8	10	12	7	113	13.33	9.667	2-May-06
322420-	1	2	1	3	2	3	2	2	2	2	20	1.333	2.333	11-Sep-03
322922-	6	6	4	8	7	3	5	2	5	1	47	4	3.5	20-Jun-07
323075-	12	13	11	11	13	16	9	21	8	6	120	21	6	28-Mar-08
332360-	0	0	1	0	3	1	0	2	1	2	10	0.333	1	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03

Table 16 continued

333185-	0	0	0	0	1	12	8	8	8	6	43	0.333	8	17-May-05
333202-	0	1	1	4	1	1	2	0	0	1	11	0.667	1.333	22-Sep-03
343345-	0	0	0	0	0	0	1	0	0	1	2	0	0.333	9-Feb-04
343355-	2	1	0	0	0	0	0	0	1	0	4	0	0.333	6-Jun-05
343365-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	8/26/2003, 9/2/2003
343385-	0	0	0	1	2	1	2	1	3	1	11	0.333	1.333	26-Oct-04
351120-	21	38	52	50	33	31	44	54	43	26	392	38	41	14-Aug-06
351170-	9	9	3	4	11	5	10	6	8	1	66	6.667	5	18-Jan-06
351210-	25	28	22	14	15	15	11	23	16	5	174	25	13.67	18-Mar-03
410245-	19	25	14	13	15	17	21	13	14	14	165	17.33	17	29-Mar-04
410500-	132	144	141	188	160	162	123	108	80	49	1287	163	103.7	10-May-05
410510-	56	59	88	67	86	107	140	83	46	38	770	71.33	110	29-Mar-04
410520-	55	62	66	64	41	48	52	40	57	66	551	64	46.67	29-Mar-04
410530-	7	14	11	12	9	7	8	13	16	38	135	12.33	9.333	29-Mar-04
422250-	0	1	1	2	1	0	0	0	0	1	6	0.667	0.333	11-Feb-03
442740-	0	0	0	0	1	0	2	5	1	0	9	0.333	2.667	11-Jan-05
511110-	27	22	25	28	30	17	13	4	6	3	175	27.67	7.667	17-Jun-05
511120-	32	34	53	27	33	24	17	5	13	3	241	37.67	11.67	17-Jun-05
511180-	20	13	26	13	17	12	20	10	16	15	162	19.67	16.33	20-Aug-03
550570-	41	38	43	34	31	35	52	46	47	18	385	40.67	39.33	24-Dec-03
620399-	3	4	5	3	2	2	3	0	1	0	23	4	2.333	10-Sep-03
620590-	218	198	212	240	265	283	247	241	206	168	2278	216.7	257	21-Jan-04
621580-	3	1	0	0	1	7	0	0	0	0	12	0.333	2.333	1/7/2004, 5/4/2004
631630-	5	4	4	6	6	8	11	9	8	12	73	9.5	8.5	25-Jul-07
641910-	11	18	12	16	10	33	23	18	31	15	187	15.33	24.67	18-May-04

Table 16 continued

642165-	3	2	1	5	5	2	2	2	0	0	22	2.667	2	27-Feb-04
712870-	119	136	190	225	324	340	289	253	224	194	2294	148.3	317.7	3/28/2003, 5/20/2003
721940-	387	388	439	486	487	550	519	477	405	359	4497	507.7	413.7	7-Dec-06
722010-	711	668	545	661	768	833	921	743	606	482	6938	658	756.7	11-Jul-05
722010-	711	668	545	661	768	833	921	743	606	482	6938	754	610.3	4-Dec-06
731520-	30	24	15	25	38	31	20	42	38	17	280	23	29.67	17-Nov-03
751300-	28	30	32	21	55	42	47	51	20	18	344	44.5	35.5	30-Nov-07
751300-	28	30	32	21	55	42	47	51	20	18	344	51	18	4/16/2008, 4/29/2008
751320-	13	11	5	9	2	0	0	0	0	0	40	9.667	0.667	26-Jun-03
752020-	7	20	10	21	13	23	13	10	15	8	140	12.33	16.33	10-Apr-03
752940-	1	0	1	1	1	0	0	0	0	1	5	0.667	0.333	4-Apr-03
752960-	0	1	3	1	0	1	0	0	0	0	6	0.667	0	23-Oct-06
753025-	25	20	30	20	14	0	0	0	0	0	109	25	4.667	2-May-03
753100-	3	3	7	5	5	2	2	1	5	4	37	2	3	6-Jul-07
753170-	30	44	46	26	29	32	13	10	5	3	238	33.67	9.333	11-May-05
771273-	0	3	0	1	2	2	1	1	2	0	12	1	1.667	22-Sep-03
M001994	13	21	21	40	22	23	26	31	23	20	240	27.33	26.67	22-Dec-04
M003235	188	187	232	286	316	399	351	335	271	247	2812	375	303	16-Jun-07
M003243	8	12	6	12	6	7	6	4	6	5	72	4	5	10-Apr-08

Table 17: Annual and 3-Year Average Crash Counts for Non-Fatal Injury Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	1	3	0	2	2	3	0	9	7	9	36	1.333	5.333	13-Oct-05
0000261	0	3	0	0	1	0	0	1	0	0	5	1	0	24-Oct-08
0000266	1	2	0	0	1	0	2	0	0	0	6	0.667	0.667	8-Dec-04
0000337	4	2	1	0	1	1	1	1	0	1	12	1	1	14-Jan-04
0000399	7	1	3	4	4	12	10	5	9	5	60	11	7	22-Jun-07
0000399	7	1	3	4	4	12	10	5	9	5	60	5	5	25-Mar-08
0000418	0	6	6	2	2	5	4	7	4	1	37	3	4	7-Jul-06
0000476	2	0	1	2	1	0	1	0	5	0	12	1	1.667	15-Feb-06
0000554	21	24	20	21	23	13	14	18	16	13	183	21.67	15	3-Sep-04
0000683	0	0	0	0	2	0	1	0	0	0	3	0.667	0	12-Jan-06
0000687	3	1	1	0	0	0	0	1	0	1	7	0.667	0.333	15-Mar-04
0000810	12	21	16	15	20	21	32	33	25	14	209	33	14	12-Jun-08
0000846	1	0	0	0	1	1	0	1	1	0	5	0.333	0.667	28-Oct-03
0001077	5	6	6	7	5	4	4	2	2	3	44	5.667	4.333	26-Jun-03
0001298	46	54	36	40	50	62	76	69	49	29	511	50.67	49	29-Jun-06
0001364	0	0	0	0	0	1	1	0	2	0	4	0	0	13-Mar-08
0001558	9	7	13	11	15	8	13	10	20	8	114	10.5	15	29-Jan-07
0001575	16	12	20	21	17	26	15	14	14	14	169	21.33	14	16-Oct-06
0002041	0	0	0	0	0	0	1	2	1	3	7	0.5	1.5	14-Mar-07
0003085	0	0	1	1	2	0	1	0	1	0	6	0.667	0.333	14-Jun-04
0003086	0	0	1	1	2	0	1	0	1	0	6	0.667	0.333	14-Jun-04
0003090	0	0	1	0	0	2	0	0	0	0	3	0.333	0	12-Apr-05

Table 17 continued

0004166	46	41	39	39	35	31	22	32	22	9	316	37.67	25.33	4-Mar-05
0004266	10	12	13	24	8	9	11	5	6	6	104	11.67	9.333	6-Feb-03
0004405	232	224	225	212	217	178	141	130	141	122	1822	130	122	1/18/2008, 2/5/2008, 4/10/2008
0004424	0	2	0	0	1	0	1	0	0	0	4	0.333	0.333	10-Jan-05
0004446	0	0	0	2	0	0	0	1	0	0	3	1	0	22-Feb-08
0004650	2	6	2	1	0	4	5	3	2	0	25	3	0	29-Jul-08
0005071	0	0	0	0	0	0	0	1	1	1	3	0	0.667	16-Nov-05
0006016	19	25	21	14	16	23	17	13	7	4	159	21.67	18.67	1-Dec-03
0006073	18	19	23	18	25	21	13	9	10	12	168	20	14.33	29-Mar-04
0006365	1	0	0	0	2	1	1	4	2	2	13	4	2	2-May-08
0006402	522	568	532	467	480	556	541	476	439	437	5018	548.5	457.5	20-Feb-07
0006867	3	6	6	4	0	4	0	0	1	2	26	0	2	24-Oct-08
0006952	2	4	5	2	2	6	7	0	1	3	32	3.667	4.333	3-Sep-04
0007020	1	0	1	0	0	0	0	0	1	0	3	0.333	0.333	6-Sep-05
0007069	1	3	4	6	2	1	3	7	4	4	35	2	5.5	27-Feb-07
0007070	13	12	10	10	4	11	8	5	4	8	85	5	8	12-Oct-08
0007240	2	2	0	1	1	1	1	1	2	1	12	1	1.5	24-Apr-07
0007493	0	1	5	1	5	4	3	5	0	2	26	3.333	2.333	10-Oct-06
0007950	3	9	8	5	6	6	5	4	5	8	59	5.667	5.667	18-Jul-06
0008234	6	24	21	24	28	35	27	32	18	12	227	29	20.67	18-Dec-06
0008274	19	17	21	25	41	24	23	27	24	26	247	30	25.67	14-Dec-06
110530-	41	114	115	156	168	147	163	129	132	115	1280	146.3	141.3	9-Sep-05
110620-	13	6	4	1	5	0	12	6	6	7	60	2	6.333	30-Oct-06
110640-	6	4	6	5	9	6	8	4	9	6	63	4	6	5-Jun-08
110650-	2	4	2	2	2	4	3	1	0	3	23	1	3	5-Jun-08

Table 17 continued

110660-	5	2	8	3	5	3	1	2	3	1	33	2	1	5-Jun-08
110670-	22	11	10	14	10	12	7	11	8	11	116	11	11	5-Jun-08
110680-	13	6	9	6	6	8	9	12	8	4	81	12	4	5-Jun-08
110690-	2	3	4	4	4	6	3	1	2	1	30	1	1	5-Jun-08
110700-	22	21	20	21	28	17	20	33	21	14	217	33	14	5-Jun-08
110710-	3	2	2	5	5	2	1	3	3	0	26	3	0	5-Jun-08
121970-	4	7	4	4	4	5	7	5	1	0	41	6	3	10-Oct-07
122320-	16	11	22	11	15	18	16	8	10	5	132	14.67	14	8-Mar-04
171004-	0	0	0	0	0	0	1	0	0	1	2	0	0.333	25-Feb-03
210810-	17	6	11	6	13	23	10	17	14	13	130	14	14.67	28-Jun-06
231220-	5	0	1	2	12	9	4	11	5	6	55	6.5	8	8-Aug-07
232240-	5	6	4	6	5	8	3	7	3	0	47	5	5.333	13-Aug-03
232260-	9	4	8	6	4	10	10	8	3	2	64	6.667	4.333	2-May-06
232260-	9	4	8	6	4	10	10	8	3	2	64	10	5.5	12-Mar-07
232315-	0	0	0	0	1	0	1	1	0	1	4	0	0.667	10-Sep-03
245370-	0	1	0	0	1	0	0	0	0	0	2	0.333	0.333	19-Aug-03
245371-	0	1	0	0	0	0	0	0	1	2	4	0.333	0	10-Sep-03
311630-	0	3	4	9	7	2	4	4	11	7	51	6	7.333	22-Jun-06
322350-	3	1	4	0	4	4	3	3	2	2	26	2.667	2.333	2-May-06
322420-	0	4	0	2	3	2	2	2	3	0	18	1.333	2.333	11-Sep-03
322922-	3	5	0	2	3	5	1	1	1	3	24	3	1	20-Jun-07
323075-	1	4	2	2	1	5	4	6	4	1	30	6	1	28-Mar-08
332360-	0	0	0	0	1	0	0	0	0	1	2	0	0	13-Jan-04
333160-	0	0	0	0	0	0	0	0	1	0	1	0	0	22-Sep-03
333185-	0	0	0	0	0	11	5	6	2	4	28	0	4.333	17-May-05

Table 17 continued

333202-	1	0	0	0	1	0	0	0	0	1	3	0.333	0.333	22-Sep-03
343345-	0	0	0	0	0	1	1	0	0	1	3	0	0.667	9-Feb-04
343355-	3	0	0	1	1	0	0	0	1	2	8	0.667	0.333	6-Jun-05
343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	1	0	1	1	0	1	0	1	5	0.333	0.667	26-Oct-04
351120-	14	24	24	28	22	24	22	20	17	14	209	24.67	17	14-Aug-06
351170-	4	2	7	3	3	4	3	4	3	1	34	3.333	2.667	18-Jan-06
351210-	24	11	17	10	10	21	5	9	7	4	118	17.33	12	18-Mar-03
410245-	9	14	9	11	10	10	18	14	7	5	107	11.33	14	29-Mar-04
410500-	62	57	54	76	69	69	42	51	38	17	535	66.33	43.67	10-May-05
410510-	26	30	43	28	35	52	52	33	21	18	338	33.67	45.67	29-Mar-04
410520-	22	28	43	35	42	27	23	24	20	23	287	35.33	24.67	29-Mar-04
410530-	6	5	6	12	9	5	12	9	7	10	81	7.667	8.667	29-Mar-04
422250-	0	0	1	0	1	1	0	0	1	0	4	0.333	0.667	11-Feb-03
442740-	1	0	1	1	1	0	0	0	1	0	5	1	0.333	11-Jan-05
511110-	14	7	5	10	20	11	7	1	8	3	86	11.67	5.333	17-Jun-05
511120-	16	23	20	16	22	13	18	11	4	5	148	19.33	11	17-Jun-05
511180-	6	5	8	5	8	5	6	2	8	4	57	6.333	6.333	20-Aug-03
550570-	21	14	21	20	19	12	13	23	19	10	172	18.67	14.67	24-Dec-03
620399-	1	2	1	1	1	0	0	1	0	0	7	1.333	0.333	10-Sep-03
620590-	73	76	78	81	71	94	69	61	57	41	701	78.33	74.67	21-Jan-04
621580-	0	0	0	0	2	0	0	0	0	0	2	0	0	1/7/2004, 5/4/2004
631630-	5	2	7	2	5	5	2	4	4	4	40	3.5	4	25-Jul-07
641910-	11	5	9	14	22	23	11	17	13	3	128	9.333	17	18-May-04
642165-	1	3	7	6	10	6	4	5	2	5	49	5.333	5	27-Feb-04

Table 17 continued

712870-	60	63	60	83	103	97	105	102	93	78	844	61	101.7	3/28/2003, 5/20/2003
721940-	145	160	154	176	137	175	172	161	132	126	1538	162.7	139.7	7-Dec-06
722010-	207	179	164	174	205	222	221	199	176	135	1882	181	198.7	11-Jul-05
722010-	207	179	164	174	205	222	221	199	176	135	1882	200.3	170	4-Dec-06
731520-	16	5	7	6	12	4	8	8	13	4	83	9.333	8	17-Nov-03
751300-	2	6	4	4	8	9	12	10	5	3	63	10.5	7.5	30-Nov-07
751300-	2	6	4	4	8	9	12	10	5	3	63	10	3	4/16/2008, 4/29/2008
751320-	9	7	6	0	0	0	0	0	0	0	22	7.333	0	26-Jun-03
752020-	3	2	2	2	1	4	2	0	1	2	19	2.333	2.333	10-Apr-03
752940-	0	0	0	1	0	1	0	0	0	0	2	0	0.333	4-Apr-03
752960-	0	1	0	0	0	0	0	1	0	0	2	0	0.333	23-Oct-06
753025-	13	7	9	6	1	0	0	0	0	0	36	9.667	0.333	2-May-03
753100-	1	0	4	2	0	3	1	2	0	2	15	2	1	6-Jul-07
753170-	18	17	17	21	23	11	7	1	4	3	122	20.33	4	11-May-05
771273-	0	2	2	1	0	1	1	2	2	2	13	1.333	0.667	22-Sep-03
M001994	6	10	4	18	12	8	7	5	7	9	86	10.67	6.667	22-Dec-04
M003235	62	92	78	83	113	121	118	121	105	97	990	119.5	113	16-Jun-07
M003243	1	2	3	0	0	5	4	0	2	1	18	0	1	10-Apr-08

APPENDIX E: CRASH RESULTS BY TYPE

The crash data shown in Tables 18 – 23 below represents crashes over the project lengths beyond the design exception locations. For this reason, the annual crashes by crash type may not be correlated with design exceptions. Future efforts will be needed to explore a potential relationship between the crash data and design exceptions.

Table 18: Annual and 3-Year Average Crash Counts for Angle Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	7	6	3	6	7	4	5	3	4	9	54	5.333	4	13-Oct-05
0000261	0	3	1	0	3	2	2	1	0	0	12	1	0	24-Oct-08
0000266	0	2	2	1	1	1	0	0	2	0	9	1.667	0.333	8-Dec-04
0000337	5	7	3	2	3	1	2	4	2	2	31	4	2.333	14-Jan-04
0000399	2	1	2	3	3	3	5	0	3	2	24	4	1.5	22-Jun-07
0000399	2	1	2	3	3	3	5	0	3	2	24	0	2	25-Mar-08
0000418	0	13	4	2	1	8	10	9	9	2	58	3.667	6.667	7-Jul-06
0000476	2	2	1	0	2	1	2	1	3	1	15	1	1.667	15-Feb-06
0000554	48	61	55	65	72	25	38	34	51	28	477	60.33	32.33	3-Sep-04
0000683	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	2	0	0	2	0	0.667	15-Mar-04

Table 18 continued

0000810	17	22	23	25	24	19	38	41	29	24	262	41	24	12-Jun-08
0000846	3	2	4	2	1	1	0	1	0	0	14	3	0.667	28-Oct-03
0001077	8	5	9	8	6	4	2	2	3	4	51	7.333	4	26-Jun-03
0001298	91	112	91	53	81	56	51	57	39	12	643	63.33	36	29-Jun-06
0001364	1	0	0	1	0	0	1	0	1	0	4	0	0	13-Mar-08
0001558	4	3	4	5	6	7	3	6	8	1	47	5	7	29-Jan-07
0001575	17	14	17	22	16	19	11	11	14	12	153	19	12.33	16-Oct-06
0002041	0	0	0	0	0	0	2	2	1	1	6	1	1.5	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	1	1	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	1	1	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05
0004166	57	48	44	44	50	43	38	31	36	21	412	46	35	4-Mar-05
0004266	3	7	3	7	6	2	7	2	2	2	41	4.333	5	6-Feb-03
0004424	5	3	1	1	3	2	2	3	0	0	20	1.667	1.667	10-Jan-05
0004446	2	0	2	0	0	0	1	1	1	0	7	1	0	22-Feb-08
0004650	3	6	4	1	2	2	4	5	4	0	31	5	0	29-Jul-08
0005071	0	0	0	0	0	0	0	0	0	0	0	0	0	16-Nov-05
0006016	1	5	3	3	4	5	8	4	2	0	35	3	5.667	1-Dec-03
0006073	10	7	10	8	3	3	5	6	0	2	54	8.333	4.667	29-Mar-04
0006365	4	1	1	0	4	5	1	5	2	6	29	5	6	2-May-08
0006867	16	10	6	4	3	9	8	0	0	0	56	0	0	24-Oct-08
0006952	6	12	12	4	7	11	14	5	7	7	85	9.333	10	3-Sep-04
0007020	1	0	1	0	0	0	0	0	3	0	5	0.333	1	6-Sep-05
0007069	3	1	5	3	1	1	1	5	3	5	28	1	4	27-Feb-07
0007070	14	8	7	14	9	8	11	4	4	5	84	4	5	12-Oct-08

Table 18 continued

0007240	0	0	0	0	0	0	0	1	0	0	1	0	0.5	24-Apr-07
0007493	3	2	6	6	8	10	7	9	0	0	51	8	3	10-Oct-06
0007950	4	6	8	8	6	7	7	2	5	10	63	7	5.667	18-Jul-06
0008234	0	3	3	6	6	2	8	2	4	2	36	4.667	2.667	18-Dec-06
0008274	2	1	7	4	5	3	5	1	4	2	34	4	2.333	14-Dec-06
110620-	6	6	2	2	0	0	7	3	3	4	33	0.667	3.333	30-Oct-06
110640-	3	0	0	3	3	0	1	4	4	0	18	4	0	5-Jun-08
110650-	0	2	1	2	3	1	1	0	0	1	11	0	1	5-Jun-08
110660-	1	3	3	1	2	0	2	2	1	2	17	2	2	5-Jun-08
110670-	2	1	1	1	4	1	0	2	0	0	12	2	0	5-Jun-08
110680-	3	2	0	6	1	0	2	2	2	2	20	2	2	5-Jun-08
110690-	2	1	1	2	1	1	3	0	2	1	14	0	1	5-Jun-08
110700-	9	6	11	13	20	8	3	12	9	4	95	12	4	5-Jun-08
110710-	0	0	0	0	0	0	1	0	0	0	1	0	0	5-Jun-08
121970-	3	6	2	3	2	1	3	6	1	0	27	2	3.5	10-Oct-07
122320-	6	11	7	8	6	10	8	13	13	6	88	8.667	10.33	8-Mar-04
171004-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Feb-03
210810-	11	9	15	9	18	19	18	19	9	9	136	15.33	12.33	28-Jun-06
231220-	2	0	0	1	5	6	2	10	6	4	36	4	8	8-Aug-07
232240-	0	1	0	0	2	2	0	3	0	0	8	0.333	1.333	13-Aug-03
232260-	10	6	11	7	7	11	11	9	3	3	78	8.333	5	2-May-06
232260-	10	6	11	7	7	11	11	9	3	3	78	11	6	12-Mar-07
232315-	0	0	1	0	0	0	0	0	0	0	1	0.333	0	10-Sep-03
245370-	0	0	0	0	0	0	0	0	0	0	0	0	0	19-Aug-03
245371-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03

Table 18 continued

311630-	0	0	0	1	0	0	0	1	2	1	5	0.333	1.333	22-Jun-06
322350-	3	2	3	0	2	1	1	0	1	0	13	1	0.333	2-May-06
322420-	1	1	0	0	0	0	3	0	3	0	8	0.667	1	11-Sep-03
322922-	4	4	0	2	4	4	4	0	3	2	27	4	1.5	20-Jun-07
323075-	5	9	3	6	4	7	5	12	8	2	61	12	2	28-Mar-08
332360-	0	0	1	0	0	0	0	1	0	0	2	0.333	0.333	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	0	13	3	9	5	6	36	0	5.667	17-May-05
333202-	0	0	1	0	0	0	0	0	0	1	2	0.333	0	22-Sep-03
343345-	0	0	0	0	0	0	0	0	0	1	1	0	0	9-Feb-04
343355-	1	0	0	0	0	0	0	0	0	0	1	0	0	6-Jun-05
343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Oct-04
351120-	8	21	24	23	18	20	22	24	19	16	195	20.33	19.67	14-Aug-06
351170-	2	3	1	0	1	0	3	2	2	0	14	0.333	1.333	18-Jan-06
351210-	14	16	16	10	12	17	5	4	4	2	100	15.33	11.33	18-Mar-03
410245-	1	1	1	1	1	1	2	2	2	0	12	1	1.667	29-Mar-04
410500-	18	17	16	23	20	18	28	29	14	7	190	19.67	23.67	10-May-05
410510-	6	16	15	10	7	16	8	10	4	3	95	13.67	11.33	29-Mar-04
410520-	2	3	4	5	7	3	3	3	5	3	38	4	3	29-Mar-04
410530-	1	0	0	2	3	1	1	4	1	3	16	0.667	2	29-Mar-04
422250-	0	0	1	0	0	0	0	0	0	0	1	0.333	0	11-Feb-03
442740-	0	0	0	0	1	0	0	1	0	0	2	0.333	0.333	11-Jan-05
511110-	7	1	6	4	8	5	3	0	0	0	34	6	1	17-Jun-05
511120-	5	2	1	3	0	3	2	2	0	0	18	1.333	1.333	17-Jun-05

Table 18 continued

511180-	3	0	4	1	5	1	5	1	5	3	28	2.333	3.667	20-Aug-03
550570-	24	20	16	20	20	20	30	31	35	15	231	20	23.33	24-Dec-03
620399-	1	3	5	2	2	0	1	0	0	0	14	3	1	10-Sep-03
620590-	75	73	77	79	78	80	60	73	61	42	698	76.33	71	21-Jan-04
621580-	0	0	0	0	0	2	0	0	0	0	2	0	0.667	1/7/2004, 5/4/2004
631630-	3	0	5	3	3	3	6	4	4	4	35	4.5	4	25-Jul-07
641910-	5	10	6	3	11	20	6	11	12	4	88	6.333	12.33	18-May-04
642165-	2	1	0	2	5	0	0	0	0	1	11	1	0	27-Feb-04
712870-	15	24	31	45	79	56	76	64	55	49	494	23.33	70.33	3/28/2003, 5/20/2003
731520-	15	3	5	4	7	4	6	9	6	1	60	7.667	5.667	17-Nov-03
751300-	4	9	6	5	11	10	18	19	4	4	90	14	11.5	30-Nov-07
751300-	4	9	6	5	11	10	18	19	4	4	90	19	4	4/16/2008, 4/29/2008
751320-	2	5	3	2	1	0	0	0	0	0	13	3.333	0.333	26-Jun-03
752020-	0	2	2	2	4	1	3	3	0	2	19	1.333	2.667	10-Apr-03
752940-	0	0	0	0	0	0	0	0	0	0	0	0	0	4-Apr-03
752960-	0	0	0	1	0	1	0	0	0	0	2	0.667	0	23-Oct-06
753025-	8	9	8	8	6	0	0	0	0	0	39	8.333	2	2-May-03
753100-	2	1	2	1	1	0	0	2	1	3	13	0	1.5	6-Jul-07
753170-	17	27	19	16	10	13	8	6	1	4	121	15	5	11-May-05
771273-	0	5	2	1	2	2	0	3	2	2	19	2.333	1.333	22-Sep-03
M001994	1	2	1	3	2	2	2	5	0	2	20	2	3	22-Dec-04
M003243	1	1	0	2	0	1	1	0	0	0	6	0	0	10-Apr-08

Table 19: Annual and 3-Year Average Crash Counts for Head On Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Oct-05
0000261	0	0	0	0	0	0	1	0	0	0	1	0	0	24-Oct-08
0000266	0	0	0	0	0	0	0	0	0	0	0	0	0	8-Dec-04
0000337	1	0	0	0	0	0	0	0	0	0	1	0	0	14-Jan-04
0000399	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Jun-07
0000399	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Mar-08
0000418	0	0	0	0	0	0	1	0	0	0	1	0	0	7-Jul-06
0000476	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Feb-06
0000554	0	0	0	0	0	0	2	1	1	0	4	0	1	3-Sep-04
0000683	1	0	0	0	0	0	0	0	0	0	1	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Mar-04
0000810	0	0	2	2	2	0	0	1	0	2	9	1	2	12-Jun-08
0000846	0	0	0	0	0	0	0	0	0	0	0	0	0	28-Oct-03
0001077	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Jun-03
0001298	0	2	1	0	2	0	0	0	0	0	5	0.667	0	29-Jun-06
0001364	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Mar-08
0001558	0	0	0	0	0	0	0	0	0	0	0	0	0	29-Jan-07
0001575	1	0	0	1	0	0	0	0	0	0	2	0.333	0	16-Oct-06
0002041	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05

Table 19 continued

0004166	0	0	0	3	1	0	1	0	1	0	6	1.333	0.667	4-Mar-05
0004266	0	1	0	2	0	1	0	0	0	0	4	0.333	0.333	6-Feb-03
0004424	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Jan-05
0004446	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Feb-08
0004650	0	0	0	0	0	1	0	0	0	0	1	0	0	29-Jul-08
0005071	0	0	0	0	0	0	0	0	0	0	0	0	0	16-Nov-05
0006016	0	0	0	0	0	0	2	1	1	0	4	0	0.667	1-Dec-03
0006073	0	1	0	0	1	0	0	0	0	0	2	0.333	0	29-Mar-04
0006365	0	0	0	0	0	0	0	3	0	0	3	3	0	2-May-08
0006867	0	0	1	0	0	0	1	0	0	0	2	0	0	24-Oct-08
0006952	0	0	0	0	1	0	0	0	0	0	1	0	0	3-Sep-04
0007020	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Sep-05
0007069	0	0	0	0	0	0	1	0	0	0	1	0.5	0	27-Feb-07
0007070	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Oct-08
0007240	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Apr-07
0007493	0	0	0	0	0	0	1	0	0	0	1	0	0	10-Oct-06
0007950	0	0	0	0	1	0	1	0	1	0	3	0.333	0.333	18-Jul-06
0008234	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Dec-06
0008274	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Dec-06
110620-	0	0	0	0	0	0	1	0	0	0	1	0	0	30-Oct-06
110640-	0	0	0	0	1	1	2	0	0	0	4	0	0	5-Jun-08
110650-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110660-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110670-	0	0	0	1	0	1	0	0	1	0	3	0	0	5-Jun-08
110680-	1	0	0	1	1	1	2	1	1	0	8	1	0	5-Jun-08

Table 19 continued

110690-	0	0	0	0	0	0	0	0	0	1	1	0	1	5-Jun-08
110700-	0	1	0	0	0	0	0	0	0	0	1	0	0	5-Jun-08
110710-	0	0	0	0	0	1	0	0	0	0	1	0	0	5-Jun-08
121970-	0	0	1	0	0	0	0	1	0	0	2	0	0.5	10-Oct-07
122320-	0	3	2	0	3	3	1	1	0	0	13	1.667	1.667	8-Mar-04
171004-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Feb-03
210810-	0	1	0	0	1	0	1	0	0	0	3	0.333	0	28-Jun-06
231220-	0	0	0	0	0	0	0	0	0	0	0	0	0	8-Aug-07
232240-	1	0	0	0	0	0	0	0	0	0	1	0.333	0	13-Aug-03
232260-	0	0	0	0	1	0	1	0	0	0	2	0.333	0	2-May-06
232260-	0	0	0	0	1	0	1	0	0	0	2	0.5	0	12-Mar-07
232315-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
245370-	0	0	0	0	0	0	0	0	0	0	0	0	0	19-Aug-03
245371-	0	0	0	0	0	0	0	0	1	0	1	0	0	10-Sep-03
311630-	0	0	0	0	0	1	0	0	0	0	1	0.333	0	22-Jun-06
322350-	0	0	0	0	1	2	0	0	0	0	3	1	0	2-May-06
322420-	0	0	0	0	0	1	0	0	0	0	1	0	0.333	11-Sep-03
322922-	0	2	0	0	0	0	0	0	0	0	2	0	0	20-Jun-07
323075-	0	0	0	0	0	0	0	0	0	0	0	0	0	28-Mar-08
332360-	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	0	0	0	0	0	0	0	0	0	17-May-05
333202-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
343345-	0	0	0	0	0	0	0	0	0	0	0	0	0	9-Feb-04
343355-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jun-05

Table 19 continued

343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Oct-04
351120-	0	1	1	1	0	0	0	0	1	0	4	0.333	0.333	14-Aug-06
351170-	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Jan-06
351210-	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Mar-03
410245-	2	0	1	1	1	0	1	0	0	0	6	0.667	0.333	29-Mar-04
410500-	1	0	1	1	0	1	0	1	0	1	6	0.667	0.333	10-May-05
410510-	0	0	0	0	0	0	0	0	0	0	0	0	0	29-Mar-04
410520-	0	0	0	0	0	0	0	1	0	0	1	0	0.333	29-Mar-04
410530-	0	1	1	0	0	0	0	0	0	0	2	0.667	0	29-Mar-04
422250-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Feb-03
442740-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Jan-05
511110-	1	0	0	0	0	0	0	0	0	0	1	0	0	17-Jun-05
511120-	0	0	0	0	2	1	0	0	0	1	4	0.667	0	17-Jun-05
511180-	0	0	0	0	1	0	0	0	0	0	1	0	0.333	20-Aug-03
550570-	1	0	0	1	0	0	0	1	1	0	4	0.333	0	24-Dec-03
620399-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
620590-	0	1	2	0	0	1	0	0	4	0	8	1	0.333	21-Jan-04
621580-	0	0	0	0	1	0	0	0	0	0	1	0	0	1/7/2004, 5/4/2004
631630-	0	0	0	0	0	0	0	1	0	0	1	0	0.5	25-Jul-07
641910-	0	0	0	1	0	0	0	1	2	0	4	0.333	0.333	18-May-04
642165-	0	1	0	0	0	0	0	0	0	0	1	0.333	0	27-Feb-04
712870-	2	1	0	2	0	2	0	0	0	0	7	1	0.667	3/28/2003, 5/20/2003
731520-	0	0	2	0	2	0	0	0	0	0	4	0.667	0.667	17-Nov-03

Table 19 continued

751300-	0	0	0	0	0	2	0	1	0	0	3	1	0.5	30-Nov-07
751300-	0	0	0	0	0	2	0	1	0	0	3	1	0	4/16/2008, 4/29/2008
751320-	0	0	0	1	0	0	0	0	0	0	1	0	0	26-Jun-03
752020-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Apr-03
752940-	0	0	0	0	0	0	0	0	0	0	0	0	0	4-Apr-03
752960-	0	0	0	0	0	0	0	0	0	0	0	0	0	23-Oct-06
753025-	1	0	0	2	0	0	0	0	0	0	3	0.333	0	2-May-03
753100-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jul-07
753170-	0	0	0	0	0	0	1	0	1	0	2	0	0.667	11-May-05
771273-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
M001994	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Dec-04
M003243	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Apr-08

Table 20: Annual and 3-Year Average Crash Counts for Rear End Crashes

PROJ_CNTY_PROJ_EXT_PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	7	7	12	16	14	11	11	27	22	15	142	14	20	13-Oct-05
0000261	0	1	0	0	1	1	0	2	0	0	5	2	0	24-Oct-08
0000266	2	4	3	1	3	2	3	0	0	1	19	2.667	1.667	8-Dec-04
0000337	0	2	1	1	1	3	1	2	1	1	13	1.333	2	14-Jan-04
0000399	9	11	9	6	14	16	18	16	16	11	126	17	16	22-Jun-07
0000399	9	11	9	6	14	16	18	16	16	11	126	16	11	25-Mar-08
0000418	0	6	13	4	6	11	12	10	5	4	71	7	6.333	7-Jul-06
0000476	2	2	2	4	3	3	2	2	3	0	23	3.333	1.667	15-Feb-06
0000554	12	14	12	11	8	14	29	34	29	27	190	12.33	25.67	3-Sep-04
0000683	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Mar-04
0000810	32	41	29	31	36	35	47	60	33	21	365	60	21	12-Jun-08
0000846	0	0	2	0	1	0	0	1	1	1	6	0.667	0.333	28-Oct-03
0001077	9	5	7	7	9	4	6	5	3	0	55	7	6.333	26-Jun-03
0001298	66	74	56	51	74	170	155	161	100	58	965	98.33	106.3	29-Jun-06
0001364	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Mar-08
0001558	4	3	9	1	7	2	8	4	6	3	47	5	5	29-Jan-07
0001575	15	7	9	15	6	16	8	11	10	13	110	12.33	11.33	16-Oct-06
0002041	0	0	0	0	0	1	2	2	0	2	7	1.5	1	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05

Table 20 continued

0004166	73	59	56	52	55	48	47	46	39	30	505	54.33	44	4-Mar-05
0004266	11	17	17	23	19	16	16	14	17	9	159	15	17	6-Feb-03
0004424	1	3	1	3	3	2	5	3	0	1	22	2.333	2.667	10-Jan-05
0004446	0	1	0	1	0	0	0	0	0	0	2	0	0	22-Feb-08
0004650	1	5	2	2	1	1	5	2	3	4	26	2	4	29-Jul-08
0005071	0	0	0	0	0	0	0	0	1	2	3	0	0.333	16-Nov-05
0006016	11	18	16	10	13	10	7	12	3	3	103	15	10	1-Dec-03
0006073	9	9	16	16	16	17	8	8	11	12	122	13.67	11	29-Mar-04
0006365	0	0	0	0	5	4	2	1	4	3	19	1	3	2-May-08
0006867	3	7	7	8	4	8	6	0	1	3	47	0	3	24-Oct-08
0006952	1	1	3	6	0	6	1	3	3	4	28	3.333	3.333	3-Sep-04
0007020	2	0	1	0	0	1	0	0	0	0	4	0.333	0	6-Sep-05
0007069	10	18	7	8	10	7	9	7	6	6	88	8	6.5	27-Feb-07
0007070	19	27	22	20	21	35	26	13	10	10	203	13	10	12-Oct-08
0007240	6	9	2	4	5	5	6	9	4	5	55	5.5	6.5	24-Apr-07
0007493	2	3	3	4	6	4	6	9	0	2	39	4.667	3.667	10-Oct-06
0007950	4	11	9	16	15	7	8	7	14	12	103	12.67	11	18-Jul-06
0008234	12	72	49	82	60	69	81	50	39	23	537	70.33	37.33	18-Dec-06
0008274	36	56	53	72	120	75	73	67	51	49	652	89	55.67	14-Dec-06
110620-	14	7	2	0	5	1	30	23	23	9	114	2	18.33	30-Oct-06
110640-	4	4	4	5	8	6	5	11	5	11	63	11	11	5-Jun-08
110650-	1	1	1	2	4	2	3	1	0	1	16	1	1	5-Jun-08
110660-	3	2	11	2	3	8	2	3	3	2	39	3	2	5-Jun-08
110670-	12	7	11	11	7	10	14	13	10	6	101	13	6	5-Jun-08
110680-	4	11	14	6	8	8	7	15	7	1	81	15	1	5-Jun-08

Table 20 continued

110690-	1	3	3	2	1	1	4	1	1	0	17	1	0	5-Jun-08
110700-	23	18	24	23	29	22	32	40	14	22	247	40	22	5-Jun-08
110710-	3	0	8	4	7	1	3	4	3	1	34	4	1	5-Jun-08
121970-	10	10	3	4	3	6	6	3	0	1	46	6	1.5	10-Oct-07
122320-	24	13	18	11	16	17	22	22	7	3	153	14	20.33	8-Mar-04
171004-	0	1	0	0	0	0	0	0	0	0	1	0.333	0	25-Feb-03
210810-	7	8	9	10	18	13	18	19	17	17	136	13.67	17.67	28-Jun-06
231220-	9	2	3	5	17	18	14	23	25	15	131	16	24	8-Aug-07
232240-	13	10	6	11	10	12	7	3	1	0	73	9.667	9.667	13-Aug-03
232260-	4	1	6	9	7	7	8	16	4	2	64	7.667	7.333	2-May-06
232260-	4	1	6	9	7	7	8	16	4	2	64	7.5	10	12-Mar-07
232315-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
245370-	0	0	0	0	0	0	0	0	0	0	0	0	0	19-Aug-03
245371-	0	0	0	0	0	1	0	0	0	0	1	0	0.333	10-Sep-03
311630-	3	5	2	8	30	3	4	8	26	22	111	13.67	18.67	22-Jun-06
322350-	4	2	4	6	7	8	7	9	8	2	57	7	6.333	2-May-06
322420-	0	0	0	0	2	1	0	3	1	0	7	0	1	11-Sep-03
322922-	1	1	3	1	1	1	0	2	1	2	13	0.5	1.5	20-Jun-07
323075-	2	6	7	4	9	9	6	15	2	3	63	15	3	28-Mar-08
332360-	0	0	0	0	1	0	0	1	1	0	3	0	0.333	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	1	5	7	4	4	4	25	0.333	5	17-May-05
333202-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	22-Sep-03
343345-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	9-Feb-04
343355-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jun-05

Table 20 continued

343365-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	8/26/2003, 9/2/2003
343385-	0	0	1	0	0	0	0	0	1	0	2	0.333	0	26-Oct-04
351120-	19	31	40	40	23	20	29	31	27	14	274	27.67	24	14-Aug-06
351170-	9	4	7	6	13	7	5	8	8	1	68	8.667	5.667	18-Jan-06
351210-	30	16	16	9	7	12	8	20	14	6	138	20.67	9	18-Mar-03
410245-	9	15	6	8	6	6	8	7	5	7	77	9.667	7	29-Mar-04
410500-	67	61	83	117	87	82	61	62	42	11	673	95.67	55	10-May-05
410510-	18	29	54	30	53	46	60	34	14	16	354	37.67	46.67	29-Mar-04
410520-	16	40	40	20	26	26	23	28	25	20	264	33.33	25.67	29-Mar-04
410530-	3	5	3	9	5	3	6	9	9	14	66	5.667	6	29-Mar-04
422250-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Feb-03
442740-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Jan-05
511110-	16	13	10	18	20	11	6	2	9	4	109	16	5.667	17-Jun-05
511120-	9	17	29	12	25	12	9	3	4	5	125	22	5.333	17-Jun-05
511180-	7	7	12	5	8	2	7	6	7	1	62	8.667	5.667	20-Aug-03
550570-	24	20	38	26	19	18	29	24	21	7	226	27.33	22	24-Dec-03
620399-	1	3	1	0	1	1	0	0	1	0	8	1.667	0.667	10-Sep-03
620590-	163	156	163	182	210	240	194	165	155	138	1766	167	199.7	21-Jan-04
621580-	3	1	0	0	0	1	0	0	0	0	5	0.333	0.333	1/7/2004, 5/4/2004
631630-	6	4	2	4	2	5	7	7	6	5	48	6	6.5	25-Jul-07
641910-	5	2	4	11	8	17	12	8	15	7	89	5.667	12.33	18-May-04
642165-	1	0	0	1	1	1	1	1	0	0	6	0.333	1	27-Feb-04
712870-	78	86	116	154	200	196	195	177	149	132	1483	93.33	197	3/28/2003, 5/20/2003
731520-	14	19	10	17	27	17	14	30	29	16	193	14.33	19.33	17-Nov-03

Table 20 continued

751300-	19	21	24	12	40	29	30	28	18	11	232	29.5	23	30-Nov-07
751300-	19	21	24	12	40	29	30	28	18	11	232	28	11	4/16/2008, 4/29/2008
751320-	16	6	5	4	0	0	0	0	0	0	31	9	0	26-Jun-03
752020-	0	6	0	5	2	4	1	3	5	2	28	2	2.333	10-Apr-03
752940-	0	0	1	0	1	0	0	0	0	1	3	0.333	0.333	4-Apr-03
752960-	0	1	2	0	0	0	0	0	0	0	3	0	0	23-Oct-06
753025-	24	14	22	15	8	0	0	0	0	0	83	20	2.667	2-May-03
753100-	2	1	9	5	4	5	3	1	3	3	36	4	2	6-Jul-07
753170-	18	22	33	22	27	17	5	5	3	1	153	27.33	4.333	11-May-05
771273-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
M001994	5	11	8	19	10	7	9	7	11	8	95	12.67	7.667	22-Dec-04
M003243	5	5	1	1	1	6	2	2	4	1	28	2	1	10-Apr-08

Table 21: Annual and 3-Year Average Crash Counts for Sideswipe-Same Direction Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	0	0	4	1	1	5	2	2	2	0	17	2	2	13-Oct-05
0000261	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Oct-08
0000266	0	0	0	0	0	0	0	0	0	0	0	0	0	8-Dec-04
0000337	0	0	2	1	1	2	2	0	0	0	8	1	1.333	14-Jan-04
0000399	1	2	2	1	0	1	3	1	0	0	11	2	0.5	22-Jun-07
0000399	1	2	2	1	0	1	3	1	0	0	11	1	0	25-Mar-08
0000418	1	9	5	0	1	6	1	0	1	1	25	2.333	0.667	7-Jul-06
0000476	1	0	0	0	1	0	1	2	1	0	6	0.333	1	15-Feb-06
0000554	10	7	14	12	15	13	10	13	10	22	126	11	12	3-Sep-04
0000683	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Mar-04
0000810	0	12	6	7	7	15	7	10	8	2	74	10	2	12-Jun-08
0000846	0	0	0	0	0	0	0	0	0	0	0	0	0	28-Oct-03
0001077	0	0	1	1	0	0	0	0	0	0	2	0.333	0	26-Jun-03
0001298	113	137	112	77	75	117	137	154	109	66	1097	89.67	109.7	29-Jun-06
0001364	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Mar-08
0001558	1	0	1	1	2	0	1	2	1	0	9	0.5	1.5	29-Jan-07
0001575	7	4	7	10	10	11	7	7	8	4	75	10.33	6.333	16-Oct-06
0002041	0	0	0	0	0	0	0	0	0	1	1	0	0	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05

Table 21 continued

0004166	37	46	29	34	30	30	25	39	26	16	312	31	30	4-Mar-05
0004266	5	3	7	3	4	5	3	4	2	2	38	5	4	6-Feb-03
0004424	2	0	1	0	1	1	2	0	0	0	7	0.667	0.667	10-Jan-05
0004446	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Feb-08
0004650	0	1	0	1	0	0	1	0	0	0	3	0	0	29-Jul-08
0005071	0	0	0	0	0	0	0	0	0	1	1	0	0	16-Nov-05
0006016	11	14	15	14	11	19	16	11	13	4	128	13.33	15.33	1-Dec-03
0006073	6	7	3	9	10	8	12	10	4	11	80	6.333	10	29-Mar-04
0006365	0	0	0	0	0	0	0	0	0	1	1	0	1	2-May-08
0006867	0	1	1	1	0	1	2	1	0	0	7	1	0	24-Oct-08
0006952	9	7	7	10	7	7	15	6	5	9	82	8	9.333	3-Sep-04
0007020	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Sep-05
0007069	0	0	0	1	0	0	0	1	0	0	2	0	0.5	27-Feb-07
0007070	4	3	5	8	6	4	7	5	3	3	48	5	3	12-Oct-08
0007240	4	1	0	0	0	0	1	1	2	0	9	0.5	1.5	24-Apr-07
0007493	0	0	0	0	0	0	0	1	0	0	1	0	0.333	10-Oct-06
0007950	1	3	1	3	1	3	1	1	5	0	19	2.333	2	18-Jul-06
0008234	17	20	21	31	28	30	29	43	17	16	252	29.67	25.33	18-Dec-06
0008274	14	13	26	27	36	28	21	15	22	15	217	30.33	17.33	14-Dec-06
110620-	7	2	2	0	2	0	13	9	9	8	52	0.667	8.667	30-Oct-06
110640-	4	1	2	3	8	3	4	3	1	4	33	3	4	5-Jun-08
110650-	2	0	1	0	2	2	2	0	0	1	10	0	1	5-Jun-08
110660-	1	1	5	2	3	1	1	0	1	3	18	0	3	5-Jun-08
110670-	6	6	6	9	9	9	5	7	4	7	68	7	7	5-Jun-08
110680-	2	1	4	8	6	4	5	2	5	2	39	2	2	5-Jun-08

Table 21 continued

110690-	1	2	0	0	0	0	2	0	0	0	5	0	0	5-Jun-08
110700-	9	11	10	14	11	10	16	10	9	8	108	10	8	5-Jun-08
110710-	0	0	0	3	2	3	1	4	3	0	16	4	0	5-Jun-08
121970-	0	1	0	3	2	2	1	2	0	0	11	1.5	1	10-Oct-07
122320-	4	4	3	4	3	1	5	3	1	5	33	3.667	3	8-Mar-04
171004-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Feb-03
210810-	5	2	6	3	6	9	4	19	7	6	67	6	10.67	28-Jun-06
231220-	0	0	0	0	3	3	1	1	3	2	13	2	2	8-Aug-07
232240-	0	0	1	0	2	1	1	1	0	1	7	0.333	1.333	13-Aug-03
232260-	1	0	1	0	4	0	2	2	0	2	12	1.333	1.333	2-May-06
232260-	1	0	1	0	4	0	2	2	0	2	12	1	1	12-Mar-07
232315-	0	0	0	0	0	0	0	0	0	1	1	0	0	10-Sep-03
245370-	0	0	0	1	0	0	0	0	0	0	1	0	0	19-Aug-03
245371-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
311630-	1	2	1	4	2	2	1	4	7	4	28	2.667	5	22-Jun-06
322350-	0	0	0	0	0	0	0	0	0	1	1	0	0.333	2-May-06
322420-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	11-Sep-03
322922-	3	2	1	4	5	2	1	1	1	0	20	1.5	1	20-Jun-07
323075-	1	1	1	1	0	1	0	0	0	0	5	0	0	28-Mar-08
332360-	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	0	3	1	0	1	0	5	0	0.667	17-May-05
333202-	0	0	0	2	0	0	0	0	0	0	2	0	0	22-Sep-03
343345-	0	0	0	0	0	0	0	0	0	0	0	0	0	9-Feb-04
343355-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jun-05

Table 21 continued

343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Oct-04
351120-	4	1	4	2	3	4	2	7	7	3	37	3	5.667	14-Aug-06
351170-	1	1	1	0	0	0	2	0	1	1	7	0	0.667	18-Jan-06
351210-	2	2	2	2	2	1	1	3	0	0	15	2	1.333	18-Mar-03
410245-	7	8	1	3	5	5	9	9	5	3	55	4	7.667	29-Mar-04
410500-	20	22	35	57	42	52	32	31	18	6	315	44.67	27	10-May-05
410510-	17	13	19	20	23	43	62	35	21	9	262	17.33	46.67	29-Mar-04
410520-	12	14	15	14	14	14	14	16	21	23	157	14.33	14.67	29-Mar-04
410530-	3	4	5	5	3	2	2	4	2	9	39	4.667	2.667	29-Mar-04
422250-	0	1	0	0	0	1	0	0	0	0	2	0.333	0.333	11-Feb-03
442740-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Jan-05
511110-	4	1	6	9	5	4	6	2	2	0	39	6.667	3.333	17-Jun-05
511120-	11	9	16	9	10	7	6	1	4	1	74	11.67	3.667	17-Jun-05
511180-	6	3	7	1	2	4	6	1	7	4	41	5.333	4	20-Aug-03
550570-	3	2	3	1	1	2	4	2	6	4	28	2.667	2.333	24-Dec-03
620399-	2	0	0	1	0	0	0	0	0	0	3	0.667	0	10-Sep-03
620590-	34	35	38	38	36	44	43	39	32	19	358	37	42	21-Jan-04
621580-	0	0	0	0	0	2	0	0	0	0	2	0	0.667	1/7/2004, 5/4/2004
631630-	1	0	1	0	0	0	0	0	0	1	3	0	0	25-Jul-07
641910-	1	1	1	3	1	2	3	1	3	2	18	1.667	2	18-May-04
642165-	0	0	0	0	0	0	0	0	0	0	0	0	0	27-Feb-04
712870-	40	47	47	68	90	115	79	72	74	49	681	44.67	94.67	3/28/2003, 5/20/2003
731520-	12	4	4	8	9	13	7	10	11	3	81	6.667	9.667	17-Nov-03

Table 21 continued

751300-	4	2	3	6	7	1	4	6	3	4	40	2.5	4.5	30-Nov-07
751300-	4	2	3	6	7	1	4	6	3	4	40	6	4	4/16/2008, 4/29/2008
751320-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Jun-03
752020-	7	9	9	16	8	19	9	4	9	5	95	8.333	12	10-Apr-03
752940-	0	0	0	0	0	0	0	0	0	0	0	0	0	4-Apr-03
752960-	0	0	0	0	0	0	0	0	0	0	0	0	0	23-Oct-06
753025-	3	2	5	1	0	0	0	0	0	0	11	3.333	0	2-May-03
753100-	0	1	0	0	0	0	0	0	1	0	2	0	0.5	6-Jul-07
753170-	12	5	7	8	11	10	5	0	1	0	59	8.667	2	11-May-05
771273-	0	0	0	0	0	1	0	0	0	0	1	0	0.333	22-Sep-03
M001994	6	5	5	11	6	7	8	10	3	3	64	7	8.333	22-Dec-04
M003243	0	1	2	5	3	3	2	0	3	1	20	0	1	10-Apr-08

Table 22: Annual and 3-Year Average Crash Counts for Sideswipe-Opposite Direction Crashes

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Oct-05
0000261	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Oct-08
0000266	0	0	0	0	0	1	1	0	0	0	2	0	0.667	8-Dec-04
0000337	1	0	0	1	0	0	0	0	0	0	2	0.333	0	14-Jan-04
0000399	1	0	0	0	1	0	0	0	0	0	2	0	0	22-Jun-07
0000399	1	0	0	0	1	0	0	0	0	0	2	0	0	25-Mar-08
0000418	1	0	0	1	1	1	0	0	0	0	4	1	0	7-Jul-06
0000476	0	0	0	0	2	0	0	0	0	0	2	0.667	0	15-Feb-06
0000554	0	0	0	0	0	0	0	0	0	0	0	0	0	3-Sep-04
0000683	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Jan-06
0000687	0	0	0	0	0	0	0	0	0	0	0	0	0	15-Mar-04
0000810	1	1	2	0	0	0	1	0	0	0	5	0	0	12-Jun-08
0000846	0	0	0	0	0	0	0	0	0	0	0	0	0	28-Oct-03
0001077	0	0	0	0	0	0	0	0	0	1	1	0	0	26-Jun-03
0001298	3	1	4	0	2	2	1	2	0	0	15	1.333	0.667	29-Jun-06
0001364	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Mar-08
0001558	0	2	0	0	0	1	1	0	0	0	4	1	0	29-Jan-07
0001575	0	0	0	0	0	0	1	0	1	0	2	0	0.333	16-Oct-06
0002041	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Mar-07
0003085	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003086	0	0	0	0	0	0	0	0	0	0	0	0	0	14-Jun-04
0003090	0	0	0	0	0	0	0	0	0	0	0	0	0	12-Apr-05

Table 22 continued

0004166	2	1	2	1	1	1	1	0	0	0	9	1.333	0.333	4-Mar-05
0004266	1	1	0	1	2	0	0	0	0	0	5	0.667	0.667	6-Feb-03
0004424	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Jan-05
0004446	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Feb-08
0004650	0	0	0	0	0	1	0	1	0	0	2	1	0	29-Jul-08
0005071	0	0	0	0	0	0	0	0	0	0	0	0	0	16-Nov-05
0006016	1	0	0	1	0	1	1	0	0	0	4	0.333	0.667	1-Dec-03
0006073	0	0	0	1	0	1	0	0	0	1	3	0.333	0.333	29-Mar-04
0006365	0	0	0	0	0	0	0	0	0	0	0	0	0	2-May-08
0006867	1	0	0	0	0	1	0	0	0	0	2	0	0	24-Oct-08
0006952	1	0	1	1	1	1	0	0	0	0	5	0.667	0.333	3-Sep-04
0007020	0	0	1	0	0	0	0	0	0	0	1	0.333	0	6-Sep-05
0007069	0	0	0	0	0	0	0	0	0	0	0	0	0	27-Feb-07
0007070	3	1	0	0	1	1	1	1	0	1	9	1	1	12-Oct-08
0007240	0	0	0	0	0	0	0	0	0	0	0	0	0	24-Apr-07
0007493	0	0	0	0	0	0	0	0	0	1	1	0	0.333	10-Oct-06
0007950	0	0	0	0	0	1	1	0	0	0	2	0.333	0	18-Jul-06
0008234	0	1	0	0	0	0	0	0	2	0	3	0	0.667	18-Dec-06
0008274	0	0	0	1	0	0	0	0	0	1	2	0.333	0.333	14-Dec-06
110620-	0	0	0	0	0	0	0	0	0	0	0	0	0	30-Oct-06
110640-	0	0	0	0	0	0	0	1	0	0	1	1	0	5-Jun-08
110650-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110660-	1	0	0	0	0	0	0	0	2	0	3	0	0	5-Jun-08
110670-	0	0	0	0	0	0	1	0	0	0	1	0	0	5-Jun-08
110680-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08

Table 22 continued

110690-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
110700-	0	0	0	2	1	0	0	0	0	0	3	0	0	5-Jun-08
110710-	0	0	0	0	0	0	0	0	0	0	0	0	0	5-Jun-08
121970-	2	0	1	0	0	0	0	0	0	0	3	0	0	10-Oct-07
122320-	1	0	4	0	1	3	4	3	1	1	18	1.333	3.333	8-Mar-04
171004-	0	0	0	0	0	0	0	0	0	0	0	0	0	25-Feb-03
210810-	0	0	0	0	1	0	0	1	0	0	2	0.333	0.333	28-Jun-06
231220-	0	0	0	0	1	0	1	0	0	1	3	0.5	0	8-Aug-07
232240-	0	0	0	1	1	1	0	0	0	0	3	0	0.667	13-Aug-03
232260-	0	0	0	1	0	0	0	0	0	0	1	0.333	0	2-May-06
232260-	0	0	0	1	0	0	0	0	0	0	1	0	0	12-Mar-07
232315-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
245370-	1	1	0	0	0	0	0	0	0	0	2	0.667	0	19-Aug-03
245371-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
311630-	0	0	0	0	0	0	0	0	0	1	1	0	0.333	22-Jun-06
322350-	0	0	0	0	1	0	0	0	0	0	1	0.333	0	2-May-06
322420-	0	0	0	0	0	0	0	0	0	0	0	0	0	11-Sep-03
322922-	1	0	0	0	0	0	0	0	0	0	1	0	0	20-Jun-07
323075-	0	0	1	0	0	1	0	0	0	0	2	0	0	28-Mar-08
332360-	0	0	0	0	0	0	0	0	0	0	0	0	0	13-Jan-04
333160-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
333185-	0	0	0	0	0	0	0	0	0	0	0	0	0	17-May-05
333202-	0	0	0	0	0	0	1	0	0	0	1	0	0.333	22-Sep-03
343345-	0	0	0	0	0	0	0	0	0	0	0	0	0	9-Feb-04
343355-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jun-05

Table 22 continued

343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	0	0	0	0	0	0	0	0	0	0	26-Oct-04
351120-	0	0	0	1	0	3	0	1	1	2	8	1.333	1.333	14-Aug-06
351170-	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Jan-06
351210-	0	0	0	0	0	0	0	0	0	0	0	0	0	18-Mar-03
410245-	1	0	0	1	1	0	0	0	0	0	3	0.333	0	29-Mar-04
410500-	0	0	1	2	1	0	0	0	1	0	5	1.333	0.333	10-May-05
410510-	2	1	0	1	0	0	1	0	0	0	5	0.667	0.333	29-Mar-04
410520-	2	0	0	0	0	0	0	0	0	1	3	0	0	29-Mar-04
410530-	0	0	0	0	0	0	0	0	0	0	0	0	0	29-Mar-04
422250-	0	0	0	1	0	0	0	0	0	0	1	0	0	11-Feb-03
442740-	0	0	0	0	1	0	1	0	1	0	3	0.333	0.667	11-Jan-05
511110-	1	1	0	0	1	0	0	0	0	0	3	0.333	0	17-Jun-05
511120-	0	0	0	0	0	0	0	1	0	0	1	0	0.333	17-Jun-05
511180-	0	0	1	0	0	0	0	0	0	0	1	0.333	0	20-Aug-03
550570-	2	2	1	0	0	3	0	5	1	0	14	1.667	1	24-Dec-03
620399-	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Sep-03
620590-	0	1	0	3	0	2	1	1	0	0	8	1.333	1.333	21-Jan-04
621580-	0	0	0	0	0	0	0	0	0	0	0	0	0	1/7/2004, 5/4/2004
631630-	0	0	0	0	0	2	0	0	0	1	3	1	0	25-Jul-07
641910-	1	0	1	0	0	1	1	1	1	0	6	0.333	1	18-May-04
642165-	0	0	0	0	0	1	0	1	0	0	2	0	0.667	27-Feb-04
712870-	1	0	2	0	0	1	0	0	2	0	6	1	0.333	3/28/2003, 5/20/2003
731520-	1	0	0	0	0	0	0	0	2	0	3	0.333	0	17-Nov-03

Table 22 continued

751300-	1	0	0	0	2	5	5	4	0	1	18	5	2	30-Nov-07
751300-	1	0	0	0	2	5	5	4	0	1	18	4	1	4/16/2008, 4/29/2008
751320-	2	2	0	0	0	0	0	0	0	0	4	1.333	0	26-Jun-03
752020-	0	0	0	0	0	1	0	0	1	0	2	0	0.333	10-Apr-03
752940-	0	0	0	0	0	0	0	0	0	0	0	0	0	4-Apr-03
752960-	0	0	0	0	0	0	0	0	0	0	0	0	0	23-Oct-06
753025-	0	0	0	0	0	0	0	0	0	0	0	0	0	2-May-03
753100-	0	0	0	0	0	0	0	0	0	0	0	0	0	6-Jul-07
753170-	1	1	0	1	0	0	0	0	0	0	3	0.333	0	11-May-05
771273-	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Sep-03
M001994	0	0	0	0	0	0	0	0	0	0	0	0	0	22-Dec-04
M003243	0	0	0	0	0	0	0	0	0	0	0	0	0	10-Apr-08

Table 23: Annual and 3-Year Average Crash Counts for Crashes Not Involving Motor Vehicle

PROJ_CNTY _PROJ_EXT_ PROJ_ID	Annual Crash Frequency											3-year Average Crash Frequency		Design Exception Approval Date
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	Total	Before	After	
0000259	1	0	0	1	1	3	0	0	1	0	7	0.667	0.333	13-Oct-05
0000261	0	2	0	0	0	0	0	1	0	0	3	1	0	24-Oct-08
0000266	3	1	1	0	0	0	0	0	0	0	5	0.667	0	8-Dec-04
0000337	0	3	0	1	0	1	1	1	1	1	9	1.333	1	14-Jan-04
0000399	4	3	4	4	1	6	5	7	7	3	44	5.5	7	22-Jun-07
0000399	4	3	4	4	1	6	5	7	7	3	44	7	3	25-Mar-08
0000418	0	3	0	2	0	0	0	0	0	0	5	0.667	0	7-Jul-06
0000476	0	0	0	1	0	0	3	0	0	0	4	0.333	0	15-Feb-06
0000554	2	1	2	0	1	2	4	6	6	0	24	1	4	3-Sep-04
0000683	0	0	0	0	2	1	1	0	0	0	4	1	0	12-Jan-06
0000687	4	1	1	0	0	0	0	1	1	1	9	0.667	0.333	15-Mar-04
0000810	11	9	7	9	6	6	6	13	13	6	86	13	6	12-Jun-08
0000846	0	0	0	0	1	0	0	0	1	0	2	0	0.333	28-Oct-03
0001077	3	2	1	5	1	0	2	0	1	0	15	2	1	26-Jun-03
0001298	5	11	9	9	13	13	20	16	9	7	112	11.67	10.67	29-Jun-06
0001364	0	0	0	0	0	1	2	0	2	0	5	0	0	13-Mar-08
0001558	13	18	19	17	12	14	25	15	24	18	175	19.5	19.5	29-Jan-07
0001575	32	39	30	30	39	35	28	22	19	20	294	34.67	20.33	16-Oct-06
0002041	0	0	0	0	0	0	0	0	1	0	1	0	0.5	14-Mar-07
0003085	0	0	2	1	2	0	1	1	4	0	11	1	0.667	14-Jun-04
0003086	0	0	2	1	2	0	1	1	4	0	11	1	0.667	14-Jun-04
0003090	0	0	1	0	1	3	0	0	0	0	5	0.667	0	12-Apr-05

Table 23 continued

0004166	5	8	4	11	7	10	5	5	3	5	63	7.333	4.333	4-Mar-05
0004266	8	8	8	7	4	8	8	3	2	9	65	8	6.667	6-Feb-03
0004424	0	2	0	1	0	0	2	2	0	0	7	0.333	1.333	10-Jan-05
0004446	0	0	0	1	1	0	1	1	0	0	4	1	0	22-Feb-08
0004650	1	2	4	4	2	1	3	1	1	3	22	1	3	29-Jul-08
0005071	0	0	0	0	0	0	0	1	2	0	3	0	1	16-Nov-05
0006016	19	25	23	14	21	42	25	26	20	15	230	22.33	29.33	1-Dec-03
0006073	27	18	19	24	34	23	15	9	17	21	207	20.33	15.67	29-Mar-04
0006365	3	0	0	2	1	4	1	10	5	3	29	10	3	2-May-08
0006867	0	0	2	0	0	1	0	0	0	0	3	0	0	24-Oct-08
0006952	1	2	1	1	2	4	1	1	1	1	15	1.333	2	3-Sep-04
0007020	0	0	1	0	0	3	1	0	2	2	9	0.333	1	6-Sep-05
0007069	0	0	1	2	1	0	0	1	0	0	5	0	0.5	27-Feb-07
0007070	6	6	1	1	2	3	3	7	5	3	37	7	3	12-Oct-08
0007240	0	0	0	0	0	0	0	0	0	1	1	0	0	24-Apr-07
0007493	1	0	5	1	4	2	1	0	2	0	16	2.333	0.667	10-Oct-06
0007950	1	4	2	2	0	1	2	2	2	0	16	1	1.333	18-Jul-06
0008234	11	13	34	24	35	37	32	32	22	15	255	32	23	18-Dec-06
0008274	15	21	34	36	24	32	11	24	37	20	254	30.67	27	14-Dec-06
110620-	13	7	2	0	1	0	10	6	13	14	66	0.333	11	30-Oct-06
110640-	11	9	8	10	5	11	11	10	12	11	98	10	11	5-Jun-08
110650-	3	5	6	3	3	3	1	3	1	4	32	3	4	5-Jun-08
110660-	1	4	5	7	2	1	5	1	5	6	37	1	6	5-Jun-08
110670-	20	15	13	23	26	15	12	22	24	20	190	22	20	5-Jun-08
110680-	10	12	20	12	10	12	20	21	10	17	144	21	17	5-Jun-08

Table 23 continued

110690-	3	4	5	12	4	10	2	8	6	4	58	8	4	5-Jun-08
110700-	30	35	27	23	40	43	33	47	42	27	347	47	27	5-Jun-08
110710-	4	3	4	2	8	6	3	5	3	2	40	5	2	5-Jun-08
121970-	4	1	2	2	4	3	0	2	0	0	18	1.5	1	10-Oct-07
122320-	13	11	12	7	12	12	7	7	7	9	97	10	8.667	8-Mar-04
171004-	0	0	2	0	0	1	1	0	0	1	5	0.667	0.667	25-Feb-03
210810-	21	7	9	7	18	25	12	20	23	26	168	16.67	23	28-Jun-06
231220-	4	3	3	2	3	5	6	5	3	0	34	5.5	4	8-Aug-07
232240-	7	7	6	12	7	8	6	7	6	2	68	6.667	7	13-Aug-03
232260-	5	4	3	7	1	6	7	2	3	2	40	4.667	2.333	2-May-06
232260-	5	4	3	7	1	6	7	2	3	2	40	6.5	2.5	12-Mar-07
232315-	0	0	1	0	1	1	1	2	0	1	7	0.333	1	10-Sep-03
245370-	0	1	0	0	1	0	0	1	0	1	4	0.333	0.333	19-Aug-03
245371-	0	1	1	2	2	0	0	0	0	2	8	0.667	0.667	10-Sep-03
311630-	2	5	5	6	9	6	5	5	10	16	69	7	10.33	22-Jun-06
322350-	12	6	8	7	8	7	3	4	5	6	66	7.333	5	2-May-06
322420-	0	5	1	5	3	3	0	1	1	2	21	2	2	11-Sep-03
322922-	0	2	0	3	0	1	1	0	1	0	8	1	0.5	20-Jun-07
323075-	5	1	1	2	1	3	2	0	2	2	19	0	2	28-Mar-08
332360-	0	0	0	0	3	1	0	0	0	3	7	0	0.333	13-Jan-04
333160-	0	0	0	0	0	0	0	0	1	0	1	0	0	22-Sep-03
333185-	0	0	0	0	0	2	2	1	0	0	5	0	1	17-May-05
333202-	1	1	0	2	2	1	0	0	0	1	8	0.667	1	22-Sep-03
343345-	0	0	0	0	0	1	1	0	0	1	3	0	0.667	9-Feb-04
343355-	4	1	0	1	1	0	0	0	2	3	12	0.667	0.667	6-Jun-05

Table 23 continued

343365-	0	0	0	0	0	0	0	0	0	0	0	0	0	8/26/2003, 9/2/2003
343385-	0	0	0	1	3	2	2	2	2	2	14	0.333	2	26-Oct-04
351120-	4	8	7	11	11	8	13	12	5	5	84	10	7.333	14-Aug-06
351170-	1	3	1	1	0	2	3	0	0	0	11	1	0	18-Jan-06
351210-	3	5	5	5	4	7	2	5	5	1	42	4.333	4.333	18-Mar-03
410245-	10	16	15	13	14	16	21	9	9	9	132	14.67	15.33	29-Mar-04
410500-	90	101	60	67	80	79	47	37	43	41	645	69	42.33	10-May-05
410510-	39	31	44	35	40	58	62	37	32	28	406	36.67	52.33	29-Mar-04
410520-	46	36	51	61	38	32	37	16	26	43	386	49.33	28.33	29-Mar-04
410530-	8	9	8	8	7	6	11	6	11	22	96	8.333	7.667	29-Mar-04
422250-	0	0	1	1	2	0	0	0	1	1	6	0.333	0.667	11-Feb-03
442740-	1	0	1	1	0	0	1	4	1	0	9	0.667	2	11-Jan-05
511110-	13	13	8	7	16	9	5	1	3	5	80	10.33	3	17-Jun-05
511120-	23	31	30	19	23	15	19	9	9	2	180	24	12.33	17-Jun-05
511180-	10	8	10	11	9	10	9	4	5	12	88	9.333	9.333	20-Aug-03
550570-	8	8	6	6	10	4	2	6	2	2	54	7.333	5.333	24-Dec-03
620399-	0	0	0	1	0	1	2	1	0	0	5	0	1	10-Sep-03
620590-	19	9	10	20	12	11	18	24	11	10	144	13	17.67	21-Jan-04
621580-	0	0	0	0	2	2	0	0	0	0	4	0	0.667	1/7/2004, 5/4/2004
631630-	0	2	3	1	6	3	0	1	2	5	23	1.5	1.5	25-Jul-07
641910-	10	11	9	12	17	17	13	14	13	5	121	10.67	14.67	18-May-04
642165-	2	4	8	9	10	6	5	5	2	5	56	7	5.333	27-Feb-04
712870-	44	43	54	41	58	67	45	43	37	42	474	47	56.67	3/28/2003, 5/20/2003
731520-	4	3	1	2	5	2	1	1	4	1	24	2.667	2.667	17-Nov-03

Table 23 continued

751300-	2	4	3	3	3	4	2	3	0	1	25	3	1.5	30-Nov-07
751300-	2	4	3	3	3	4	2	3	0	1	25	3	1	4/16/2008, 4/29/2008
751320-	2	5	3	2	1	0	0	0	0	0	13	3.333	0.333	26-Jun-03
752020-	3	5	1	0	0	2	2	0	1	1	15	3	1.333	10-Apr-03
752940-	1	0	0	2	0	1	0	0	0	0	4	0.333	0.333	4-Apr-03
752960-	0	1	1	0	0	0	0	1	0	0	3	0	0.333	23-Oct-06
753025-	2	2	4	0	1	0	0	0	0	0	9	2.667	0.333	2-May-03
753100-	0	0	0	1	0	0	0	0	0	0	1	0	0	6-Jul-07
753170-	0	6	4	0	4	3	1	0	3	1	22	2.667	1.333	11-May-05
771273-	0	0	0	1	0	0	2	0	2	0	5	0	0.667	22-Sep-03
M001994	7	13	11	26	16	15	14	14	17	16	149	16.67	14.33	22-Dec-04
M003243	3	7	6	4	2	2	5	2	1	5	37	2	5	10-Apr-08

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